



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 150639

TO: Shailendra Kumar
Location: 5c03 / 5c18
Tuesday, April 19, 2005
Art Unit: 1621
Phone: 571-272-0640 711
Serial Number: 10 / 736074

From: Jan Delaval
Location: Biotech-Chem Library
Remsen 1a51
Phone: 571-272-22504

jan.delaval@uspto.gov

Search Notes

SEARCH REQUEST FORM

Requester's Full Name: S. Kumar Examiner #: 69594 Date: 4/13/05
 Art Unit: 1621 Phone Number: 2-0640 Serial Number: 101736741
 Location (Bldg/Room#): REM (Mailbox #): 5C18 Results Format Preferred (circle): PAPER DISK
 *****5C03*****

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

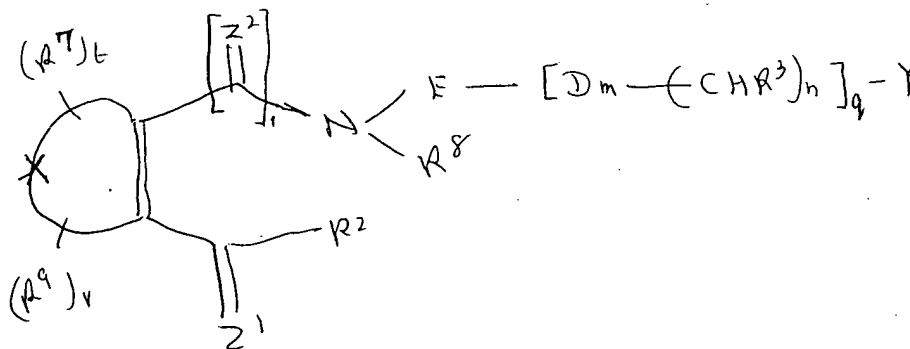
Title of Invention: Novel compounds as anti-inflammatory, immunomodulatory
 Inventors (please provide full names): Johann Leban et. al.

Earliest Priority Date: 12/23/02

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



D is O, S, SO₂, NH₄, CH₂

Z¹ & Z² are O, S, NH₂

E is alkyl, cycloalkyl

Y is H, Hal, haloalkyl etc.

Please search when compound are Non Heterocyclic
 Species of example 5, page 34

STAFF USE ONLY

Searcher: Am

Searcher Phone #: 22504

Searcher Location: 415/05

Date Searcher Picked Up: 4/19/05

Date Completed: 4/19/05

Type of Search

____ NA Sequence (#)

____ AA Sequence (#)

☒ Structure (#)

____ Bibliographic

____ Litigation

Vendors and cost where applicable

☒ STN ☐ Dialog

☐ Questel/Orbit ☐ Lexis/Nexis

☐ Westlaw ☐ WWW/Internet

____ In-house sequence systems

____ Commercial ☐ Oligomer ☐ Score/Length
 ____ Interference ☐ SPDI

=> fil reg

FILE 'REGISTRY' ENTERED AT 12:31:07 ON 19 APR 2005

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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d l11 ide can

L11 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 719301-52-7 REGISTRY

ED Entered STN: 30 Jul 2004

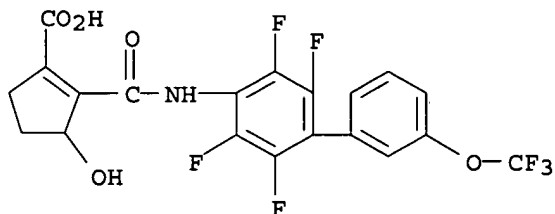
CN 1-Cyclopentene-1-carboxylic acid, 3-hydroxy-2-[[[2,3,5,6-tetrafluoro-3'-(trifluoromethoxy) [1,1'-biphenyl]-4-yl]amino]carbonyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C20 H12 F7 N O5

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:106198

=> d his

(FILE 'HCAPLUS' ENTERED AT 12:26:37 ON 19 APR 2005)

DEL HIS
L1 3 S US20040176458/PN OR (US2003-736711# OR US2002-435258#)/AP,PRN
E LEBAN J/AU
L2 60 S E3-E5,E7-E10
E KRALIK M/AU
L3 120 S E3,E4
E 4SC/PA,CS
L4 24 S E3-E20
E 4 SC/PA,CS
L5 2 S E5-E12
E 4S C/PA,CS
E 4 S C/PA,CS
L6 3 S L1 AND L2-L5
L7 194 S L2-L5 NOT L6
SEL RN L6

FILE 'REGISTRY' ENTERED AT 12:28:57 ON 19 APR 2005

L8 164 S E1-E164
L9 34 S L8 AND 46.150.18/RID AND C5/ES AND 3/NR
L10 3 S L9 AND 7/F
SEL RN 2
L11 1 S E165
L12 0 S 719301-52-7/CRN

FILE 'HCAOLD' ENTERED AT 12:30:27 ON 19 APR 2005

L13 0 S L11

FILE 'HCAPLUS' ENTERED AT 12:30:31 ON 19 APR 2005

L14 1 S L11
L15 1 S L14 AND L1-L7

FILE 'USPATFULL, USPAT2' ENTERED AT 12:30:49 ON 19 APR 2005

L16 0 S L11

FILE 'REGISTRY' ENTERED AT 12:31:07 ON 19 APR 2005

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 12:31:15 ON 19 APR 2005

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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17

FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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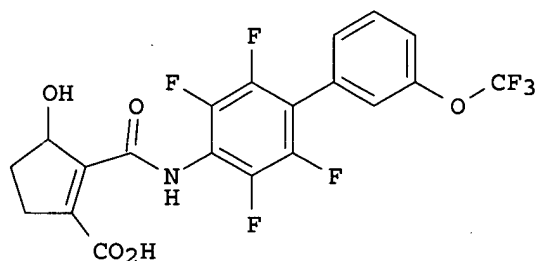
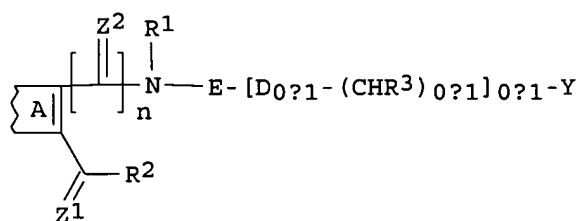
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l15 all hitstr

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L15  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:550930  HCAPLUS
DN   141:106198
ED   Entered STN:  09 Jul 2004
TI   A preparation of cycloalkenedicarboxylic acid derivatives, useful as
      dihydroorotate dehydrogenase (DHODH) inhibitors
IN   Leban, Johann; Kralik, Martin
PA   4SC A.-G., Germany
SO   PCT Int. Appl., 56 pp.
      CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  C07C233-57
      ICS  A61P035-00; A61P037-02; A61P029-00; A61P031-12; A61K031-194
CC   24-4 (Alicyclic Compounds)
      Section cross-reference(s): 1, 63
FAN.CNT 3
PATENT NO.      KIND      DATE      APPLICATION NO.      DATE
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PI  WO 2004056746      A1      20040708      WO 2003-EP14434      20031217
      W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
          CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
          GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
          LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
          PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
          UG, UZ, VC, VN, YU, ZA, ZM, ZW
      RW:  BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
          BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
          ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
          TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
      US 2004176458      A1      20040909      US 2003-736711      20031217 <--
      US 2004192758      A1      20040930      US 2003-736742      20031217 <--
PRAI DE 2002-10260800      A      20021223
      US 2002-435258P      P      20021223 <--
CLASS
PATENT NO.      CLASS      PATENT FAMILY CLASSIFICATION CODES
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WO 2004056746      ICM      C07C233-57
      ICS      A61P035-00; A61P037-02; A61P029-00; A61P031-12;
      A61K031-194
US 2004176458      ECLA      C07C233/58; C07C233/60; C07C235/40; C07C259/08;
      C07D333/38 <--
US 2004192758      ECLA      C07D307/68; C07D333/38 <--
OS   MARPAT 141:106198
GI

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- AB The invention relates to a preparation of cycloalkenedicarboxylic acid derivs. of formula I [wherein: A is a non-aromatic ring containing 4 to 8 carbon atoms, wherein the ring system comprises at least one double bond and wherein one or more of the carbon atoms in the ring can be replaced by S, O, N, or S(O), etc.; D is O, S, SO₂, or CH₂, etc.; Z₁ and Z₂ are independently selected from O, S, or NH, etc.; R₁ is H or alkyl; R₂ is H, OH, O-(cyclo)alkyl, or NH₂, etc.; R₃ is H, (cyclo)alkyl, aryl, alkoxy, halogen, or O-aryl, etc.; E is an alkyl or cycloalkyl group or a (mono/poly)cyclic (un)substituted ring system; Y is H, halogen, haloalkyl, haloalkyloxy, alkyl, cycloalkyl, a monocyclic or polycyclic (un)substituted ring system; n is 0 or 1], useful as antiinflammatory, immunomodulatory and antiproliferatory agents. The obtained compds. were screened in inhibition assay for dihydroorotate dehydrogenase (DHODH) activity. For instance, cyclopentenecarboxylic acid derivative II showed IC₅₀ value (human DHODH) of < 1μM.
- ST cycloalkenedicarboxylic acid prepn antiinflammatory immunomodulator antiproliferatory agent DHODH inhibitor; dihydroorotate dehydrogenase inhibitor cycloalkenedicarboxylic acid prepn
- IT Disease, animal
(arthropathy, treatment of; preparation of cycloalkenedicarboxylic acid derivs., useful as antiinflammatory, immunomodulatory and antiproliferatory agents)
- IT Joint, anatomical
(disease, treatment of; preparation of cycloalkenedicarboxylic acid derivs., useful as antiinflammatory, immunomodulatory and antiproliferatory agents)
- IT Cell proliferation
(diseases caused by malignant, treatment of; preparation of cycloalkenedicarboxylic acid derivs., useful as antiinflammatory, immunomodulatory and antiproliferatory agents)
- IT Immunity
(disorder, acute, treatment of; preparation of cycloalkenedicarboxylic acid derivs., useful as antiinflammatory, immunomodulatory and antiproliferatory agents)
- IT Anti-inflammatory agents
Antiasthmatics

Antirheumatic agents
 Antiviral agents
 Cytotoxic agents
 Human
 Immunomodulators
 Protozoacides
 (preparation of cycloalkenedicarboxylic acid derivs., useful as
 antiinflammatory, immunomodulatory and antiproliferatory agents)

IT Infection
 (protozoal, infestation, treatment of; preparation of
 cycloalkenedicarboxylic acid derivs., useful as antiinflammatory,
 immunomodulatory and antiproliferatory agents)

IT Inflammation
 Nose, disease
 (rhinitis, treatment of; preparation of cycloalkenedicarboxylic acid
 derivs., useful as antiinflammatory, immunomodulatory and
 antiproliferatory agents)

IT Asthma
 Autoimmune disease
 Fibrosis
 Inflammation
 Pneumocystis carinii
 Rheumatic diseases
 (treatment of; preparation of cycloalkenedicarboxylic acid derivs., useful
 as antiinflammatory, immunomodulatory and antiproliferatory agents)

IT Eye, disease
 Inflammation
 (uveitis, treatment of; preparation of cycloalkenedicarboxylic acid derivs.,
 useful as antiinflammatory, immunomodulatory and antiproliferatory
 agents)

IT Infection
 (viral, treatment of; preparation of cycloalkenedicarboxylic acid derivs.,
 useful as antiinflammatory, immunomodulatory and antiproliferatory
 agents)

IT 59088-23-2, Dihydroorotate dehydrogenase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (inhibitor; preparation of cycloalkenedicarboxylic acid derivs., useful as
 antiinflammatory, immunomodulatory and antiproliferatory agents)

IT 717824-35-6P 717824-36-7P 719301-43-6P 719301-44-7P 719301-45-8P
 719301-46-9P 719301-47-0P 719301-48-1P 719301-49-2P 719301-50-5P
 719301-51-6P 719301-52-7P 719301-53-8P 719301-54-9P
 719301-55-0P 719301-56-1P 719301-57-2P 719301-58-3P 719301-59-4P
 719301-60-7P 719301-61-8P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (preparation of cycloalkenedicarboxylic acid derivs., useful as
 antiinflammatory, immunomodulatory and antiproliferatory agents)

IT 3205-94-5 62291-37-6 344751-62-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of cycloalkenedicarboxylic acid derivs., useful as
 antiinflammatory, immunomodulatory and antiproliferatory agents)

IT 31602-26-3P, 1-Cyclopentene-1,2,3-tricarboxylic acid 122130-99-8P
 719301-42-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of cycloalkenedicarboxylic acid derivs., useful as
 antiinflammatory, immunomodulatory and antiproliferatory agents)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) 4sc Ag; WO 03006425 A 2003
 (2) Campaigne, E; J MED CHEM 1969, V12(2), P339 HCAPLUS
 (3) Carney, R; US 4126691 A 1978 HCAPLUS

- (4) Chen, S; BIOCHEMICAL PHARMACOLOGY 1990, V40(4), P709 HCAPLUS
 (5) de Julian-Ortiz, J; JOURNAL OF MEDICINAL CHEMISTRY 1999, V42, P3308 HCAPLUS
 (6) Du Pont Pharmaceuticals Co; WO 9965867 A 1999 HCAPLUS
 (7) Eisai Co Ltd; DE 3346814 A 1984 HCAPLUS
 (8) Haevel, N; WO 03006443 A 2003 HCAPLUS
 (9) Kramer, B; WO 03006424 A 2003 HCAPLUS
 (10) Matsui; CHEMICAL ABSTRACTS + INDEXES 1976, V84(5)
 (11) Mitsubishi Chem Ind; DE 2921002 A 1979 HCAPLUS
 (12) Nippon Kayaku Kk; EP 0097056 A 1983 HCAPLUS
 (13) Sim, M; WO 0124785 A 2001 HCAPLUS
 (14) Takeda Chemical Industries; CHEMICAL ABSTRACTS + INDEXES 1981, V94(25)
 (15) Takeda Chemical Industries Ltd; DE 2851379 A 1979 HCAPLUS
 (16) Thorstensson, F; JOURNAL OF MEDICINAL CHEMISTRY 2003, V46(7), P1165 HCAPLUS

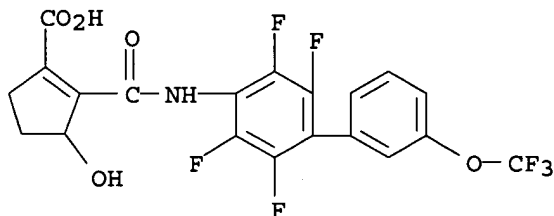
IT 719301-52-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of cycloalkenedicarboxylic acid derivs., useful as antiinflammatory, immunomodulatory and antiproliferatory agents)

RN 719301-52-7 HCAPLUS

CN 1-Cyclopentene-1-carboxylic acid, 3-hydroxy-2-[[[2,3,5,6-tetrafluoro-3'-(trifluoromethoxy) [1,1'-biphenyl]-4-yl]amino]carbonyl]- (9CI) (CA INDEX NAME)



=> => fil reg

FILE 'REGISTRY' ENTERED AT 14:22:31 ON 19 APR 2005

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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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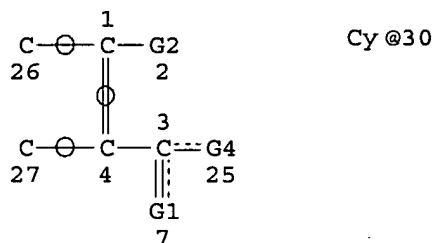
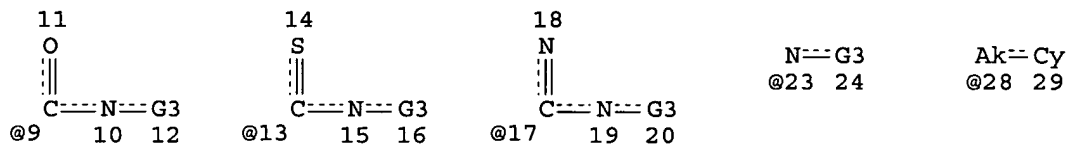
 *
 * The CA roles and document type information have been removed from *
 * the IDE default display format and the ED field has been added, *
 * effective March 20, 2005. A new display format, IDERL, is now *
 * available and contains the CA role and document type information. *

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sta que 157

L42 STR



VAR G1=O/S/N
 VAR G2=9/13/17/23
 VAR G3=28/30
 VAR G4=H/O/N

NODE ATTRIBUTES:

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GGCAT IS UNS AT 29

GGCAT IS UNS AT 30

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

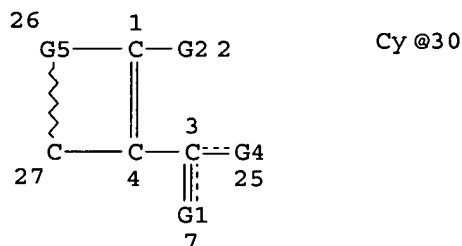
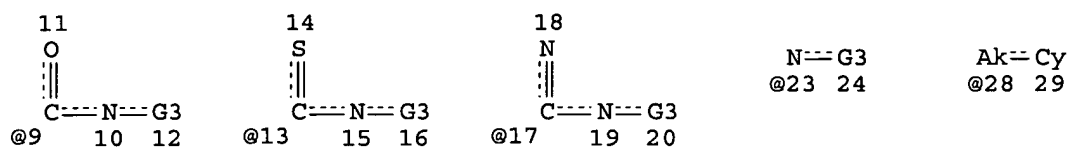
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L44 2956 SEA FILE=REGISTRY SSS FUL L42

L45 STR

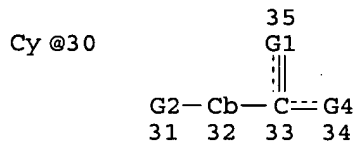
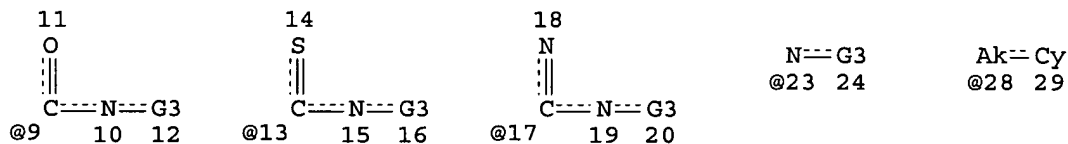


VAR G1=O/S/N
 VAR G2=9/13/17/23
 VAR G3=28/30
 VAR G4=H/O/N
 REP G5=(1-5) C
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 DEFAULT MLEVEL IS ATOM
 GGCAT IS UNS AT 29
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L47 2423 SEA FILE=REGISTRY SUB=L44 SSS FUL L45
 L55 STR



VAR G1=O/S/N
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GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L57 2097 SEA FILE=REGISTRY SUB=L47 SSS FUL L55

100.0% PROCESSED 2423 ITERATIONS

2097 ANSWERS

SEARCH TIME: 00.00.01

=> d his

(FILE 'HCAPLUS' ENTERED AT 12:26:37 ON 19 APR 2005)

DEL HIS

L1 3 S US20040176458/PN OR (US2003-736711# OR US2002-435258#)/AP,PRN
E LEBAN J/AU
L2 60 S E3-E5,E7-E10
E KRALIK M/AU
L3 120 S E3,E4
E 4SC/PA,CS
L4 24 S E3-E20
E 4 SC/PA,CS
L5 2 S E5-E12
E 4S C/PA,CS
E 4 S C/PA,CS
L6 3 S L1 AND L2-L5
L7 194 S L2-L5 NOT L6
SEL RN L6

FILE 'REGISTRY' ENTERED AT 12:28:57 ON 19 APR 2005

L8 164 S E1-E164
L9 34 S L8 AND 46.150.18/RID AND C5/ES AND 3/NR
L10 3 S L9 AND 7/F
SEL RN 2
L11 1 S E165
L12 0 S 719301-52-7/CRN

FILE 'HCAOLD' ENTERED AT 12:30:27 ON 19 APR 2005

L13 0 S L11

FILE 'HCAPLUS' ENTERED AT 12:30:31 ON 19 APR 2005

L14 1 S L11
L15 1 S L14 AND L1-L7

FILE 'USPATFULL, USPAT2' ENTERED AT 12:30:49 ON 19 APR 2005

L16 0 S L11

FILE 'REGISTRY' ENTERED AT 12:31:07 ON 19 APR 2005

FILE 'HCAPLUS' ENTERED AT 12:31:15 ON 19 APR 2005

FILE 'REGISTRY' ENTERED AT 12:31:55 ON 19 APR 2005

L17 2 S C20H12F7NO5 AND 46.150.18/RID AND C5/ES AND 3/NR
L18 1 S L17 NOT L11
L19 STR
L20 STR L19
L21 50 S L20
L22 STR L20
L23 50 S L22
L24 STR L22
L25 50 S L24
L26 STR L24

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L27      13 S L26
L28      STR L22
L29      50 S L28
L30      STR L24
L31      7 S L30
L32      STR L30
L33      0 S L32
L34      STR L32
L35      50 S L34
L36      STR L34
L37      43 S L36
L38      STR L36
L39      27 S L38
L40      SCR 2043
L41      26 S L38 NOT L40
L42      STR L38
L43      25 S L42
L44      2956 S L42 FUL
          SAV L44 KUMAR736/A
L45      STR L42
L46      50 S L45 SAM SUB=L44
L47      2423 S L45 FUL SUB=L44
          SAV L47 KUMAR736A/A
L48      STR L45
L49      0 S L48 SAM SUB=L47
L50      2 S L48 FUL SUB=L47
L51      59 S L8 AND L44
L52      33 S L51 AND L47
L53      STR L48
L54      50 S L53 SAM SUB=L47
L55      STR L53
L56      50 S L55 SAM SUB=L47
L57      2097 S L55 FUL SUB=L47
          SAV L57 KUMAR736B/A
L58      33 S L52 AND L57
L59      105 S L8 NOT L51
L60      1 S L59 AND C20H15F4NO4
L61      33 S L52,L60 NOT L11
          SAV L61 KUMAR736C/A
L62      2064 S L57 NOT L11,L61
L63      326 S L47 NOT L57
L64      281 S L63 NOT (PMS/CI OR SQL/FA)
L65      169 S L64 NOT (C5-C6 OR C6-C6)/ES
L66      146 S L65 NOT C5-C6-C6/ES
L67      134 S L66 NOT C6-C6-C6/ES
L68      25 S L67 AND (C15H13NO3 OR C15H15NO3 OR C16H15NO4 OR C16H15NO3 OR
L69      31 S L67 AND (C17H19NO2 OR C31H26N2O6 OR C18H17NO3 OR C16H15NO3 OR
L70      24 S L67 AND (C15H13NO3 OR C16H17NO3 OR C24H22N2O2 OR C15H12CLNO3
L71      8 S L67 AND (C24H22N2O2 OR C21H18N2O2 OR C24H22N2O2 OR C17H19NO2
L72      47 S L68-L71
L73      45 S L72 NOT ?NITRO?/CNS
          SEL RN 34 35
L74      43 S L73 NOT E166-E167
L75      76 S L61,L74
L76      283 S L63 NOT L75
L77      11 S L76 AND (C19H19NO4 OR C19H16N2O2 OR C23H21NO3 OR C21H20N2 OR
L78      10 S L77 NOT PMS/CI
L79      86 S L75,L78
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FILE 'HCAOLD' ENTERED AT 13:59:38 ON 19 APR 2005

L80 0 S L79

FILE 'HCAPLUS' ENTERED AT 13:59:45 ON 19 APR 2005

L81 30 S L79
L82 3 S L81 AND L1-L7
L83 29 S L81 AND (PD<=20021223 OR PRD<=20021223 OR AD<=20021223)
L84 30 S L82,L83

FILE 'USPATFULL, USPAT2' ENTERED AT 14:01:20 ON 19 APR 2005

L85 3 S L79

FILE 'REGISTRY' ENTERED AT 14:01:57 ON 19 APR 2005

L86 STR L55

FILE 'HCAPLUS' ENTERED AT 14:05:13 ON 19 APR 2005

L87 477 S L62
L88 447 S L87 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)
L89 21 S L62 (L) THU/RL
L90 9 S L62 (L) (DMA OR PKT OR PAC)/RL
L91 62 S L62 (L) BAC/RL
L92 84 S L62 (L) BIOL/RL
L93 84 S L62 (L) BIOL+NT/RL
L94 81 S L88 AND L89-L93
L95 47 S L88 AND (PHARMACEUT? OR PHARMACOL? OR PATHOL? OR IMMUN?)/SC,S
L96 19 S L88 AND (DISEAS? OR THERAP?)
L97 3 S L88 AND ?DEHYDROGENASE?

FILE 'REGISTRY' ENTERED AT 14:08:04 ON 19 APR 2005

L98 4 S DIHYDROOROTATE DEHYDROGENASE/CN

FILE 'HCAPLUS' ENTERED AT 14:08:12 ON 19 APR 2005

L99 1 S L98 AND L88
L100 1 S L88 AND DHODH
L101 10 S L88 AND (INFECTION+OLD,NT,PFT,RT OR INFLAMMATION+OLD,NT,PFT,R
L102 4 S L88 AND (IMMUNITY+OLD,NT,PFT,RT OR NOSE, DISEASE+OLD,NT,PFT,R
L103 3 S L88 AND (FIBROSIS+OLD,NT,PFT,RT OR PNEUMOCYSTIS CARINII+OLD,N
L104 113 S L94-L97,L99-L103
L105 89 S L104 AND P/DT
L106 43 S L105 AND US/PC,PRC,AC
L107 20 S L106 AND US/PC.B,PRC.B,AC.B
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:14:17 ON 19 APR 2005

L108 51 S E168-E218
L109 12 S L108 AND (C17H23NO2 OR C15H19NO2 OR C19H23CLFNO4 OR C14H13F2N

FILE 'HCAPLUS' ENTERED AT 14:19:15 ON 19 APR 2005

L110 25 S L109
L111 22 S L110 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)
L112 10 S L111 AND P/DT
L113 8 S L112 NOT HERBICID?
L114 23 S L106 NOT L107
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:20:44 ON 19 APR 2005

L115 330 S E219-E548

FILE 'HCAPLUS' ENTERED AT 14:21:57 ON 19 APR 2005

L116 38 S L84,L113
L117 3 S L116 AND L1-L7
L118 35 S L116 NOT L117

FILE 'REGISTRY' ENTERED AT 14:22:31 ON 19 APR 2005

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 14:22:45 ON 19 APR 2005
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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l118 bib abs hitstr retable tot

L118 ANSWER 1 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:354698 HCAPLUS

DN 140:375071

TI Asymmetric catalytic hydrogenation process for preparation of chiral cyclic β -aminoesters

IN Deerberg, Joerg; Mcleod, Douglas D.; Yue, Tai-yuen

PA Bristol-Myers Squibb Company, USA

SO U.S. Pat. Appl. Publ., 18 pp.

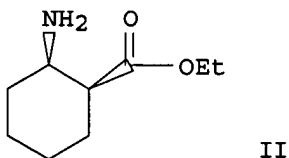
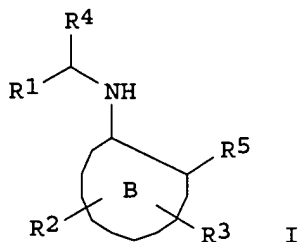
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004082795	A1	20040429	US 2003-660345	20030911 <--
	US 6835841	B2	20041228		
PRAI	US 2002-410897P	P	20020913 <--		
OS	CASREACT 140:375071; MARPAT 140:375071				
GI					



AB A catalytic asym. hydrogenation process of an β -enamino ester to I [B = 4-7-membered non-aromatic carbocyclic or heterocyclic ring; R1 = Q,

alk(en/yn)ylene; R2 = Q, alk(en/yn)ylene, etc.; Q = H, carbocycle, heterocycle; R3 = H, Cl, F, alk(en/yn)yl, Ph, etc.; R4 = H, alk(en/yn)yl; R5 = alkyloxy, carboxyl is described. For example, Et (R)-2-[(1-phenylethyl)amino]-1-cyclohexene-1-carboxylate is reduced (EtOH, HOAc, H2-PtO2, 17.5 bar, 40°, 16 h) to give the syn-β-amino ester which is converted to the HBr salt (>99% diastereomeric excess) and debenzylated (MeOH, H2-Pd/C, 7 bar, 40°, 16 h) to give II isolated as the HBr salt. Seven examples are described. The current process gives increased selectivity, higher yields and is more economical than prior art methods. I are useful as intermediates for MMP and TACE inhibitors.

IT 121506-74-9 683774-02-9 683774-03-0

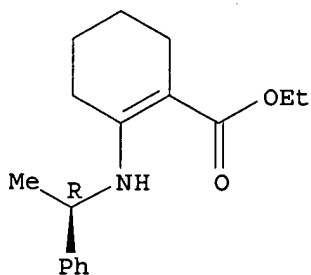
RL: RCT (Reactant); RACT (Reactant or reagent)

(asym. catalytic hydrogenation process for preparation of chiral cyclic beta-aminoesters)

RN 121506-74-9 HCAPLUS

CN 1-Cyclohexene-1-carboxylic acid, 2-[[[(1R)-1-phenylethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

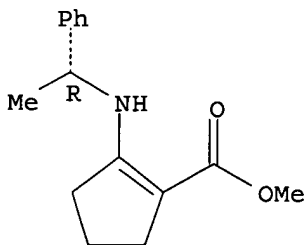
Absolute stereochemistry.



RN 683774-02-9 HCAPLUS

CN 1-Cyclopentene-1-carboxylic acid, 2-[[[(1R)-1-phenylethyl]amino]-, methyl ester (9CI) (CA INDEX NAME)

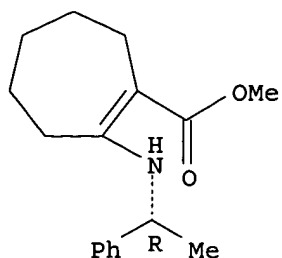
Absolute stereochemistry.



RN 683774-03-0 HCAPLUS

CN 1-Cycloheptene-1-carboxylic acid, 2-[[[(1R)-1-phenylethyl]amino]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L118 ANSWER 2 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:331784 HCAPLUS

DN 140:339193

TI Preparation of indole nitriles as cysteine protease, in particular
Cathepsin K inhibitors

IN Bamberg, Joe Timothy; Gabriel, Tobias; Krauss, Nancy Elisabeth;
Mirzadegan, Taraneh; Palmer, Wylie Solang; Smith, David Bernard

PA Roche Palo Alto, LLC, USA

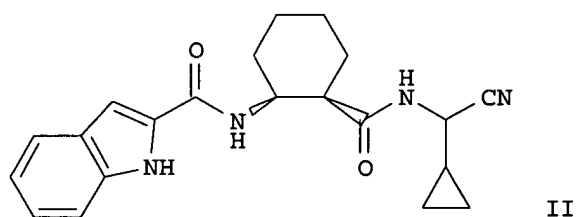
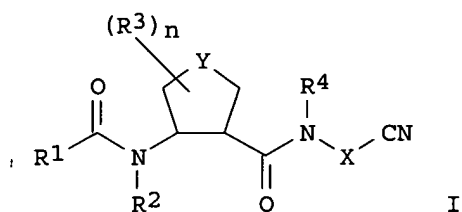
SO U.S. Pat. Appl. Publ., 141 pp., Cont.-in-part of U.S. Ser. No. 308,963.
CODEN: USXXCO

DT **Patent**

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2004077646	A1	20040422	US 2003-453112	20030602 <--
	US 6759428	B2	20040706		
	US 2003212097	A1	20031113	US 2002-308963	20021203 <--
	US 6747053	B2	20040608		
PRAI	US 2001-336750P	P	20011204	<--	
	US 2002-308963	A2	20021203	<--	
OS	MARPAT 140:339193				
GI					



AB Title compds. I [wherein n = 0-2; R1 = (un)substituted indolyl, indazolyl, benzothiazolyl, indolizynyl, tetrahydropyridoindolyl; benzopyrrolothiazolyl; X = [CH(R5R6)]q; q = 1-2; R2, R3, R4, R5 = independently H, alkyl; R6 = H, cyclo/alkyl, (CRaRb)oA; Ra, Rb = independently H, alkyl; o = 0-4; A = OH and derivs., (un)substituted Ph, pyridyl, imidazolyl, morpholinyl, CO2H and derivs., etc.; Y = (CH2)m; m = 1-3; their pharmaceutically acceptable salts, solvates and prodrugs] were prepared as cysteine protease, in particular Cathepsin K inhibitors. The compds. are useful for the treatment of diseases which are associated with cysteine proteases such as osteoporosis, tumor metastasis, unstable angina pectoris and/or plaque rupture. Thus, Et (1R,2S)-2-aminocyclohexanecarboxylate-HBr was treated with indole-2-carboxylic acid, followed by ester hydrolysis and amidation with (R,S)-amino(cyclopropyl)acetonitrile to give the amide II. I selectively inhibited Cathepsin K (no data).

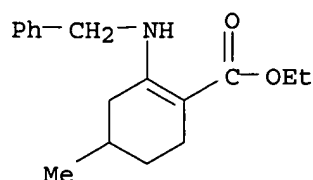
IT 680569-13-5, 2-Benzylamino-4-methylcyclohex-1-ene-1-carboxylic acid ethyl ester

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of indole nitriles as cysteine protease, in particular Cathepsin K inhibitors)

RN 680569-13-5 HCAPLUS

CN 1-Cyclohexene-1-carboxylic acid, 4-methyl-2-[(phenylmethyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
=====	=====	=====	=====	=====	=====
Anon					
Anon	1977			DE 2624290 A1	HCAPLUS
Anon	1998			WO 9803540 A2	HCAPLUS
Anon	1999			WO 9924460 A2	HCAPLUS
Anon	2001			WO 0149288 A1	HCAPLUS
Anon	2001			WO 0196285 A1	HCAPLUS
Anon	2003			WO 03041649 A2	HCAPLUS
Broemme	1999	12	73	Drug News Perspect	
Chapman	1997	59	63	Annu. Rev. Phys	HCAPLUS
Davies	1994	1	1411	J. Chem. Soc. Perkin	
Everts	1992	150	221	J. Cell. Physiol	HCAPLUS
Gabriel	2002			US 6462076 B2	HCAPLUS
Hummel	1998	25:10	1887	J. Rheumatol.	
Kobayashi	1990	38:2	350	Chem. Pharm. Bull.	
Lerner	1992	7:4	433	J. Bone Min Res.	
Littlewood-Evans	1997	57	5386	Cancer Res	HCAPLUS
Maubach	1997	250:2	745	Eur. J. Biochem.	
Otto	1997	97	133	Chem. Rev	HCAPLUS
Rink	1987	28:33	3787	Tetrahedron Lett.	
Schaper	1997			US 5691321 A	HCAPLUS
Sukhova	1998	102:3	576	J. Clin. Invest.	
Tezuka	1994	269	1106	J. Biol. Chem.	HCAPLUS
Thompson	1997	94	14249	Proc. Natl. Acad. Sc	HCAPLUS

L118 ANSWER 3 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:269913 HCAPLUS

DN 140:287277

TI Preparation of carboxylic acid derivatives that inhibit the binding of integrins to their receptors

IN Biediger, Ronald J.; Chen, Qi; Decker, E. Radford; Holland, George W.; Kassir, Jamal M.; Li, Wen; Market, Robert V.; Scott, Ian L.; Wu, Chengde; Li, Jian

PA USA

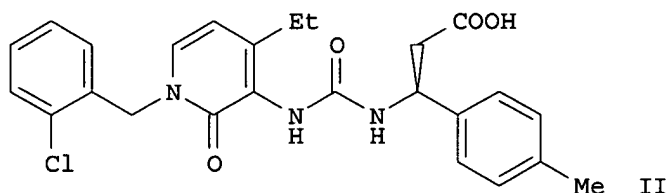
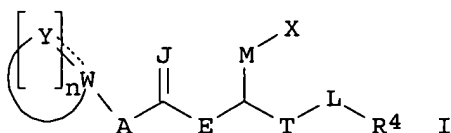
SO U.S. Pat. Appl. Publ., 98 pp., Cont.-in-part of U.S. Ser. No. 707,068.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2004063955	A1	20040401	US 2001-973142	20011009 <--
	ZA 2001008777	A	20030124	ZA 2001-8777	20011024 <--
	NZ 515252	A	20040130	NZ 2001-515252	20011102 <--
	NO 2001005394	A	20020507	NO 2001-5394	20011105 <--
	EP 1203766	A2	20020508	EP 2001-125494	20011106 <--
	EP 1203766	A3	20041208		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	TR 200103179	A2	20020621	TR 2001-200103179	20011106 <--
	BR 2001006840	A	20050201	BR 2001-6840	20011106 <--
	CN 1412181	A	20030423	CN 2001-145182	20011229 <--
	CA 2366800	AA	20030410	CA 2002-2366800	20020107 <--
	JP 2003119181	A2	20030423	JP 2002-31953	20020208 <--
PRAI	US 1999-132971P	P	19990507	<--	
	US 2000-565920	A2	20000505	<--	
	US 2000-707068	A2	20001106	<--	
	US 2001-973142	A	20011009	<--	
OS	MARPAT 140:287277				
GI					



AB The invention relates to a method for the inhibition of the binding of $\alpha 4\beta 1$ integrin to its receptors [e.g., VCAM-1 (vascular cell adhesion mol.-1) and fibronectin], compds. that inhibit this binding, and the use of such compds. for the control or prevention of diseases states in which $\alpha 4\beta 1$ is involved. The claims include compds. of general formula I [n is 3-10; Y is CO, N, CR1, CR2R3, NR5, CH, O, S; A is O, S, CR16R17, NR6; E is CH2, O, S, NR7; J is O, S, NR8; T is CO, (CH2)0-3; M is R9R10, (CH2)0-3; L is O, NR11, S, (CH2)0-1; X is CO2B, PO3H2, SO3H, SO2NH2, SO2NHCOR12, OPO3H2, CONHCOR13, CONHSO2R14, OH, tetrazolyl, H; W is C, CR15, N; B, R1-R17 are H, halo, alkyl, alkoxy, acyl, CF3, CO2H, etc.]. Thus, pyridine-containing 3-aminopropionic acid derivative II was prepared by a multistep procedure and showed IC50 = 10 nM in

a

fibronectin inhibition assay.

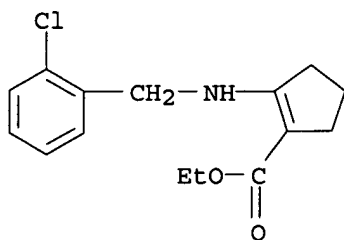
IT **422519-80-0P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of carboxylic acid derivs. that inhibit the binding of integrins to their receptors)

RN 422519-80-0 HCAPLUS

CN 1-Cyclopentene-1-carboxylic acid, 2-[[[(2-chlorophenyl)methyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



L118 ANSWER 4 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:183000 HCAPLUS

DN 140:199750

TI Heterogeneous foldamers containing α , β and/or γ -amino acids

IN Gellman, Samuel H.; Hayen, Ahlke; Schmitt, Margaret A.; Ngassa, Felix N.
 PA Wisconsin Alumni Research Foundation, USA
 SO PCT Int. Appl., 149 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004018644	A2	20040304	WO 2003-US26694	20030826 <--
	WO 2004018644	A3	20040701		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004116654	A1	20040617	US 2003-648089	20030826 <--
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PRAI US 2002-406006P P 20020826 <--

AB Disclosed are isolated, unnatural polypeptides A-(Xa-Y-Zc)d-A [X, Z are α -, β -, or γ -amino acid residues, provided that at least one X or Z is an α -amino acid residue and at least two of X or Z are cyclically-constrained γ -amino acid residues; Y is a single bond or a reverse-turn moiety; A is H, OH, an amino or carboxy protecting group; a, c, and d are pos. integers, where $a + c > 3$] or their salts. The compds. are useful for probing protein-protein and other large mol. interactions, since they are not amenable to enzymic degradation. The examples describe syntheses of peptides of the invention, including Boc-D-Ala-ACHC-OBn, where ACHC is the β -amino acid trans-2-aminocyclohexanecarboxylic acid.

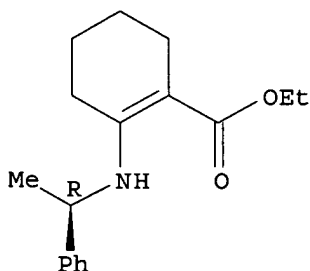
IT 121506-74-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (heterogeneous foldamers containing α , β , and/or γ -amino acids)

RN 121506-74-9 HCAPLUS

CN 1-Cyclohexene-1-carboxylic acid, 2-[[[(1R)-1-phenylethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L118 ANSWER 5 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:349146 HCAPLUS

DN 136:369608

TI Preparation of 3-(N'-oxodihydropyridinylureido)-3-phenylpropanoates as inhibitors of $\alpha\beta 1$ integrin binding

IN Biediger, Ronald J.; Chen, Qi; Holland, George W.; Kassir, Jamal M.; Li, Wen; Market, Robert V.; Scott, Ian L.; Wu, Chengde; Decker, Radford E.; Li, Jian

PA Texas Biotechnology Corporation, USA

SO Eur. Pat. Appl., 131 pp.

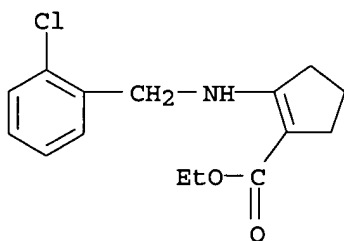
CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1203766	A2	20020508	EP 2001-125494	20011106 <--
	EP 1203766	A3	20041208		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004063955	A1	20040401	US 2001-973142	20011009 <--
	ZA 2001008777	A	20030124	ZA 2001-8777	20011024 <--
	BR 2001006840	A	20050201	BR 2001-6840	20011106 <--
PRAI	US 2000-707068	A	20001106	<--	
	US 2001-973142	A	20011009	<--	
	US 1999-132971P	P	19990507	<--	
	US 2000-565920	A2	20000505	<--	
OS	MARPAT 136:369608				
AB	Title compds. were prepared Thus, 2-ClC ₆ H ₄ CH ₂ ZNH ₂ (Z = 4-ethyl-2-oxo-1,2-dihydropyridine-1,3-diyl) (preparation given) was condensed with (S)-4-MeC ₆ H ₄ CH(NH ₂)CH ₂ CO ₂ Et and COCl ₂ to give, after saponification, (S)-2-ClC ₆ H ₄ CH ₂ ZNHCONHCH(C ₆ H ₄ Me-4)CH ₂ CO ₂ H (Z as above). Data for biol. activity of title compds. were given.				
IT	422519-80-0P				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)				
	(preparation of 3-(N'-oxodihydropyridinylureido)-3-phenylpropanoates as inhibitors of $\alpha 4\beta 1$ integrin binding)				
RN	422519-80-0 HCAPLUS				
CN	1-Cyclopentene-1-carboxylic acid, 2-[[[(2-chlorophenyl)methyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)				



L118 ANSWER 6 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:806040 HCAPLUS

DN 134:71724

TI Heteroannulations with pinane-derived β -enaminoaldehyde

AU Popov, Sergey A.; Tkachev, Alexey V.

CS Department of Natural Sciences, Novosibirsk Institute of Organic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk State University, Novosibirsk, 630090, Russia

SO Heterocyclic Communications (2000), 6(4), 327-332

CODEN: HCOMEX; ISSN: 0793-0283

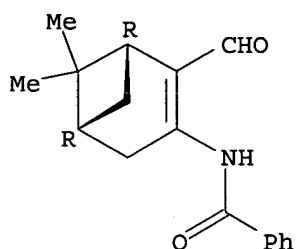
PB Freund Publishing House Ltd.

DT Journal

LA English

OS CASREACT 134:71724
 AB Synthesis of new chiral fused pyridines and pyrimidines with pinane carbon frame prospective as bioactive compds. is described. Heterocyclizations of pinane-derived β -enaminoaldehyde, need generally more rigid conditions than for o-aminobenzaldehyde, probably, both due to sterical and electronic reasons.
 IT **315674-70-5P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (heteroannelations with pinane-derived β -enaminoaldehyde)
 RN 315674-70-5 HCAPLUS
 CN Benzamide, N-[(1R,5R)-2-formyl-6,6-dimethylbicyclo[3.1.1]hept-2-en-3-yl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

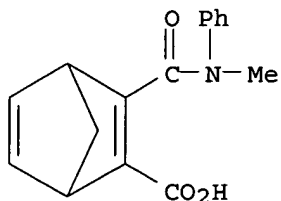


L118 ANSWER 7 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2000:693187 HCAPLUS
 DN 133:350683
 TI Synthesis and photochemical reaction of polymers containing norbornadiene residues both in the main chain and side chain
 AU Sampei, Makoto; Hiramatsu, Ken; Kameyama, Atsushi; Nishikubo, Tadatomi
 CS Department of Applied Chemistry, Faculty of Engineering University, Yokohama, 221-8686, Japan
 SO Kobunshi Ronbunshu (2000), 57(9), 569-576
 CODEN: KBRBA3; ISSN: 0386-2186
 PB Kobunshi Gakkai
 DT Journal
 LA Japanese
 AB The polyaddn. of 2,5-norbornadiene-2,3-dicarboxylic acid diglycidyl ester (NDGE) with adipoyl chloride gave a polyester (P-1) containing norbornadiene (NBD) residues in the main chain and pendant chloromethyl groups in the side chain. Polyesters containing NBD residues both in the main chain and side chains were synthesized by the polymer reaction of P-1 with certain NBD derivs. When substitution reactions of P-1 with potassium 3-phenyl-2,5-NBD-2-carboxylate (PNC), potassium 3-phenyl-2,5-NBD-2-(4'-hydroxyphenyl) ketone (PNHK), potassium 3-(N,N-dipropylcarbamoyl)-2,5-NBD-2-carboxylate (DPNC), and potassium 3-(N-methyl-N-phenylcarbamoyl)-2,5-NBD-2-carboxylate (MPNC) were carried out using tetrabutylammonium bromide (TBAB) as a phase transfer catalyst in NMP for 48 h, corresponding NBD polymers (P-2-P-5) containing PNC, PNHK, DPNC, or MPNC groups were obtained in good yields. When the photochem. valence isomerization of NBD residues in polymers was performed in the film state, the rate of the photochem. reaction of NBD residue in the main chain of P-2 was higher than that of P-1. The NBD residues in the main chain of P-2 were sensitized by the pendant PNC moieties. The photo-irradiated P-2 film containing QC (quadricyclane) moieties both in the main chain and side chain released 331 J/g of thermal energy, which is the highest record as compared with other NBD polymers synthesized before.
 IT **159091-04-ODP**, reaction products with adipoyl chloride-2,5-norbornadiene-2,3-dicarboxylic acid diglycidyl ester copolymer

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and photochem. reaction of polymers containing norbornadiene
residues both in main chain and side chain)

RN 159091-04-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-
[(methylphenylamino)carbonyl]-, potassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 8 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:202256 HCAPLUS

DN 130:338468

TI Synthesis and photochemical properties of poly(ester-amide)s containing
norbornadiene (NBD) residues

AU Ikeda, Akihiko; Tsubata, Akinori; Kameyama, Atsushi; Nishikubo, Tadatoshi

CS Department of Applied Chemistry, Faculty of Engineering, Kanagawa
University, Rokkakubashi, Kanagawa-ku, Yokohama, 221-8686, Japan

SO Journal of Polymer Science, Part A: Polymer Chemistry (1999),
37(7), 917-926

CODEN: JPACEC; ISSN: 0887-624X

PB John Wiley & Sons, Inc.

DT Journal

LA English

AB N,N'-Bis[(3-carboxynorbornadien-2-yl)carbonyl]-N,N'-diphenylethyl-
enediamine (BNPE) was synthesized in 70% yield by the reaction of
2,5-norbornadiene-2,3-dicarboxylic acid anhydride with
N,N'-diphenylethylenediamine. Other dicarboxylic acid derivs. containing
norbornadiene (NBD) residues having N,N'-disubstituted amide groups were
also prepared by the reaction of 2,5-NBD-2,3-dicarboxylic acid anhydride
with secondary diamines. When the polyaddn. of BNPE with bisphenol A
diglycidyl ether (BPGE) was carried out using tetrabutylammonium bromide
as a catalyst in N-methyl-2-pyrrolidone at 100° for 12 h, a polymer
with number average mol. weight of 69,800 was obtained in 98% yield.

Polyaddns. of

other NBD dicarboxylic acid derivs. containing N,N'-disubstituted amide groups
with BPGE were also performed under the same conditions. The reaction
proceeded smoothly to give the corresponding NBD poly(ester-amide)s in
good yields. Photochem. reactions, i.e., photoisomerization and catalytic
reversion (CoTPP) of the quadricyclane groups, of the obtained polymers
with N,N'-disubstituted amide groups on the NBD residue were examined, and
these polymers were effectively sensitized by adding appropriate
photosensitizers such as 4-(N,N-dimethylamino)benzophenone and
4,4'-bis(N,N-diethylamino)benzophenone in the film state. The stored
thermal energy in the quadricyclane groups of the polymers was about 94
kJ/mol as determined from DSC measurements of irradiated polymer films.

IT 224566-45-4P, N,N'-Bis[(3-carboxynorbornadien-2-yl)carbonyl]-N,N'-
diphenylethylenediamine 224566-46-5P, N,N'-Bis[(3-
carboxynorbornadien-2-yl)carbonyl]-N,N'-dimethyldiaminodiphenylmethane
224566-47-6P

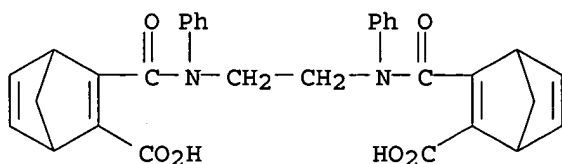
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(monomer; preparation of norbornadiene-diphenyldiamine monomers and polymerization

with bisphenol-A diglycidyl ether)

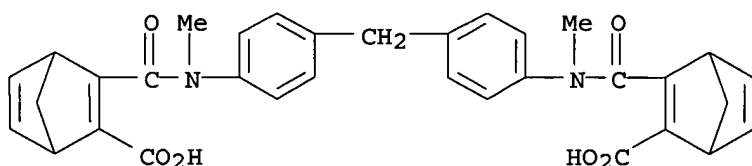
RN 224566-45-4 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[1,2-ethanediylbis[(phenylimino)carbonyl]]bis- (9CI) (CA INDEX NAME)



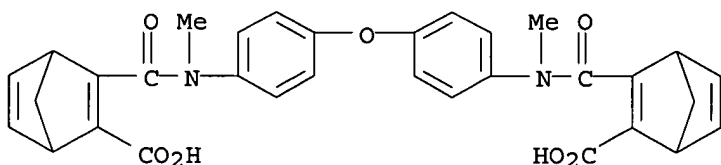
RN 224566-46-5 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[methylenebis[4,1-phenylene(methylimino)carbonyl]]bis- (9CI) (CA INDEX NAME)



RN 224566-47-6 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[oxybis[4,1-phenylene(methylimino)carbonyl]]bis- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Barluenga, J	1984		1334	J Chem Soc Chem Comm	HCAPLUS
Barluenga, J	1980		1420	J Chem Soc Perkin Tr	HCAPLUS
Hautala, R	1977	19	503	Solar Energy	HCAPLUS
Hautala, R	1979		333	Solar Energy	HCAPLUS
Kamogawa, H	1992	65	2306	Bull Chem Soc Jpn	HCAPLUS
King, R	1979	44	385	J Org Chem	HCAPLUS
Maruyama, K	1981		839	Chem Lett	HCAPLUS
Maruyama, K	1981	46	5294	J Org Chem	HCAPLUS
Maruyama, K	1985	50	4742	J Org Chem	HCAPLUS
Nishibuko, T	1989	22	8	Macromolecules	
Nishibuko, T	1992	25	4469	Macromolecules	
Nishibuko, T	1994	27	1087	Macromolecules	
Nishibuko, T	1987	19	991	Polym J	
Nishibuko, T	1992	24	1165	Polym J	
Nishikubo, T	1994	32	2765	J Polym Sci Part A:	HCAPLUS

Toa Nenryo Kogyo, K	1989			JP 01292028	HCAPLUS
Tsubata, A	1996	53	530	Kobunshi Ronbunshu	HCAPLUS
Tsubata, A	1997	54	37	Kobunshi Ronbunshu	HCAPLUS
Tsubata, A	1997	30	6549	Macromolecules	

L118 ANSWER 9 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:565479 HCAPLUS

DN 127:234647

TI Synthesis of Poly(ester-amide)s Containing Norbornadiene (NBD) Residues by the Polyaddition of NBD Dicarboxylic Acid Derivatives with Bis(epoxide)s and Their Photochemical Properties

AU Tsubata, Akinori; Uchiyama, Takeshi; Kameyama, Atsushi; Nishikubo, Tadatomi

CS Department of Applied Chemistry Faculty of Engineering, Kanagawa University, Yokohama, 221, Japan

SO Macromolecules (1997), 30(19), 5649-5654

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB N,N'-Bis[(3-carboxynorbornadien-2-yl)carbonyl]methylenedianiline (BNMA) was synthesized in 87 % yield by the reaction of 2,5-norbornadiene-2,3-dicarboxylic acid anhydride with 4,4'-methylenedianiline. Other dicarboxylic acid derivs. containing norbornadiene (NBD) residues were also prepared by the reaction of 2,5-NBD-2,3-dicarboxylic acid anhydride with certain diamines. When the polyaddn. of BNMA with bisphenol A diglycidyl ether (BPGE) was carried out using tetrabutylammonium bromide as a catalyst in NMP at 100° for 24 h, a polymer with a number-average mol. weight 18 000 was obtained in 91% yield. Polyaddns. of other NBD dicarboxylic acid derivs. with BPGE were also performed under the same conditions. The reaction proceeded very smoothly to give the corresponding NBD poly(ester-amide)s in good yields. Furthermore, the photochem. reactions of the NBD poly(ester-amide)s were evaluated in the film state or in solution. The photochem. valence isomerization of NBD residues in the polymer films proceeded smoothly to form the corresponding quadricyclane (QC) groups upon irradiation with sunlight. The photochem. reversion of the resulting QC groups in the polymer films proceeded efficiently by irradiation of 272-nm light. The stored energy in the QC groups of the polymers was evaluated to be about 84 kJ/mol by DSC measurement of the irradiated polymer films.

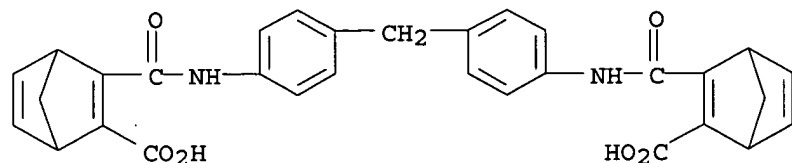
IT 195303-93-6P 195303-94-7P 195303-95-8P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in synthesis of polyester-polyamine from norbornadiene-containing dicarboxylic acid derivs. with bis(epoxide)s)

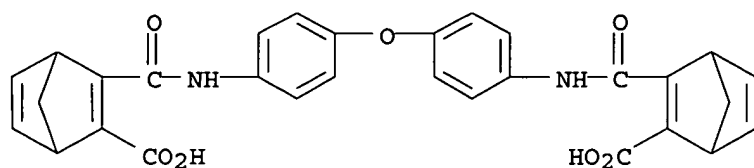
RN 195303-93-6 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[methylenebis(4,1-phenyleneiminocarbonyl)]bis- (9CI) (CA INDEX NAME)



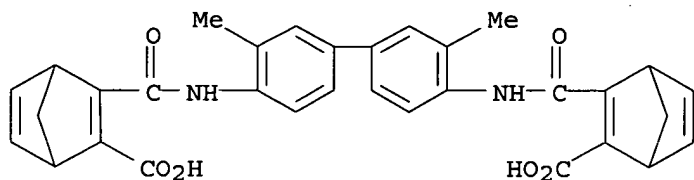
RN 195303-94-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[oxybis(4,1-phenyleneiminocarbonyl)]bis- (9CI) (CA INDEX NAME)



RN 195303-95-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(iminocarbonyl)]bis- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Hatchard, C	1956	235	518	Proc R Soc London, S	
Hautala, R	1977	19	503	Sol Energy	HCAPLUS
Hautala, R	1979		333	Solar Energy	HCAPLUS
Iizawa, T	1992	25	21	Macromolecules	HCAPLUS
King, R	1979	44	385	J Org Chem	HCAPLUS
Maruyama, K	1985	58	781	Bull Chem Soc Jpn	HCAPLUS
Maruyama, K	1981		839	Chem Lett	HCAPLUS
Nishikubo, T	1991	29	671	J Polym Sci, Part A:	HCAPLUS
Nishikubo, T	1994	32	2765	J Polym Sci, Part A:	HCAPLUS
Nishikubo, T	1989	22	8	Macromolecules	HCAPLUS
Nishikubo, T	1992	25	4469	Macromolecules	HCAPLUS
Nishikubo, T	1994	27	1087	Macromolecules	HCAPLUS
Nishikubo, T	1994	24	65	Reactive Polym	HCAPLUS
Nishimura, I	1996	29	3818	Macromolecules	HCAPLUS
Takamura, S	1995	52	415	Kobunshi Ronbunshu	HCAPLUS
Tsubata, A	1996	53	530	Kobunshi Ronbunshu	HCAPLUS
Tsubata, A	1997	54	37	Kobunshi Ronbunshu	HCAPLUS

L118 ANSWER 10 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:473696 HCAPLUS

DN 127:95206

TI Preparation of polycyclic compounds for treatment of Alzheimer's disease

IN Proctor, George Rennet; Harvey, Alan Lang; Mckenna, Maureen Theresa; Mullins, Steven John

PA University of Strathclyde, UK; Proctor, George Rennet; Harvey, Alan Lang; Mckenna, Maureen Theresa; Mullins, Steven John

SO PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DT Patent

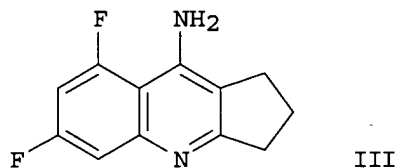
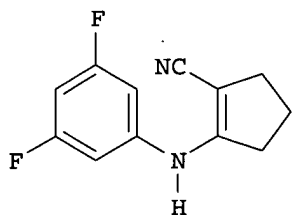
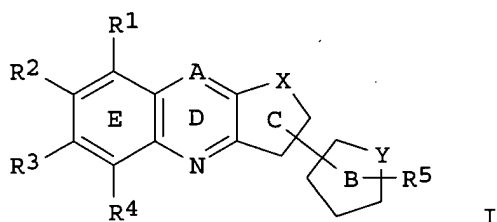
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9719929	A1	19970605	WO 1996-GB2945	19961128 <--
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LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
 RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
 MR, NE, SN, TD, TG

AU 9677027	A1	19970619	AU 1996-77027	19961128 <--
EP 877735	A1	19981118	EP 1996-940019	19961128 <--
R: CH, DE, FR, GB, IT, LI, NL				
JP 2000501092	T2	20000202	JP 1997-520287	19961128 <--
US 6130228	A	20001010	US 1998-77453	19980825 <--
PRAI GB 1995-24346	A	19951129	<--	
WO 1996-GB2945	W	19961128	<--	
OS MARPAT 127:95206				
GI				



AB The title compds. [I; R1 = NH2, OH, H, etc.; R2 = H, halo, OH, etc.; R3, R4 = H, halo, MeO, etc.; R5 = H, halo, NO2, etc.; X = (CH2)_n (wherein n = 1-4); Y = (CH)_m, (CH2)_m (wherein m = 1-3); A = C(NHR9) (wherein R9 = H, C1-6 alkyl, aryl); ring B = (un)saturated ring optionally fused to ring C at any face of ring C; ring C is optionally substituted by one or more groups selected from H, C1-6 alkyl, COOH, COOC1-6alkyl] which exhibit anti-acetylcholinesterase activity and/or inhibition of 5-HT uptake and/or inhibition of noradrenaline uptake, were prepared Thus, reaction of 3,5-difluoroaniline with 2-oxocyclopentanecarbonitrile in the presence of CaCl₂ in THF followed by cyclization of the intermediate II in the presence of TiCl₄ afforded the polycyclic compound III which showed IC₅₀ of 0.120 μM against acetylcholinesterase (AChE) and IC₅₀ of 1.400 μM against butyrylcholinesterase (BChE).

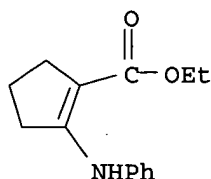
IT **52909-66-7P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

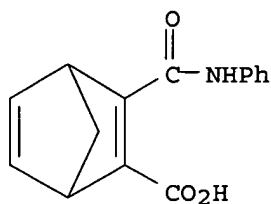
(preparation of polycyclic compds. for treatment of Alzheimer's disease).

RN 52909-66-7 HCAPLUS

CN 1-Cyclopentene-1-carboxylic acid, 2-(phenylamino)-, ethyl ester (9CI) (CA INDEX NAME)

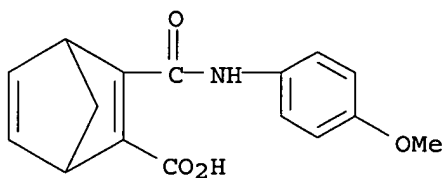


- L118 ANSWER 11 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
- AN 1995:287658 HCAPLUS
- DN 122:82267
- TI Synthesis and photochemical properties of insoluble polystyrene beads containing pendant norbornadiene moieties
- AU Nishikubo, Tadatomi; Kameyama, Atsushi; Kishi, Katsuhiko; Hijikata, Chikara
- CS Department of Applied Chemistry, Faculty of Engineering, Kanagawa University, Rokkakubashi, Kanagawa-ku, Yokohama, 221, Japan
- SO Reactive Polymers (1994), 24(1), 65-72
CODEN: REPLEN; ISSN: 0923-1137
- PB Elsevier
- DT Journal
- LA English
- AB Insol. polymer beads bearing pendant norbornadiene moieties were prepared by reacting insol. chloromethylated polystyrene beads with K salts of norbornadiene derivs. containing carboxylic or phenolic groups using a phase transfer catalyst. The reaction proceeded smoothly in high conversion in DMF at 90° for 72 h. The rates of photochem. reaction of the norbornadiene group-containing polymers were measured by IR spectrometry. The photochem. valence isomerization of the 3-phenyl-2,5-norbornadiene-2-carboxylate derivative to the corresponding quadricyclane derivative and the reverse reaction were examined in CH₂Cl₂, and the reactions were carried out in high conversion over 10 cycles.
- IT **137895-90-0DP**, Potassium 3-(phenylcarbamoyl)-2,5-norbornadiene-2-carboxylate, reaction products with chloromethylated polystyrene **137895-92-2DP**, Potassium 3-[(4-methoxyphenyl)carbamoyl]-2,5-norbornadiene-2-carboxylate, reaction products with chloromethylated polystyrene **159091-04-0DP**, Potassium 3-(methylphenylcarbamoyl)-2,5-norbornadiene-2-carboxylate, reaction products with chloromethylated polystyrene
- RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, properties and photochem. isomerization of insol. norbornadiene group-containing polystyrene beads as energy storage materials)
- RN 137895-90-0 HCAPLUS
- CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



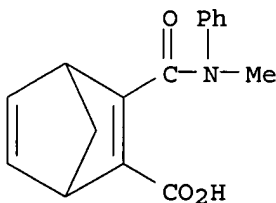
● K

RN 137895-92-2 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl)amino]carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

RN 159091-04-0 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(methylphenylamino)carbonyl]-, potassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 12 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:254478 HCAPLUS

DN 122:32296

TI Synthesis of rigid polymer containing pendant norbornadiene moieties and its photochemical valence isomerization

AU Iizawa, Takashi; Sueyoshi, Tomoko; Hijikata, Chikara; Nishikubo, Tadatomu
 CS Department Chemical Engineering, Hiroshima University, Higashi-Hiroshima, 724, Japan

SO Journal of Polymer Science, Part A: Polymer Chemistry (1994), 32(16), 3091-8

CODEN: JPACEC; ISSN: 0887-624X

PB Wiley

DT Journal

LA English

AB Polymers having pendant norbornadiene (NBD) groups on a rigid main chain were prepared by reacting partially brominated poly(2,6-dimethyl-p-phenylene oxide) with the K salt of a 2,5-norbornadiene-2-carboxylate derivative using a phase transfer catalyst in chlorobenzene. The photochem. valence isomerization of the pendant NBD to quadricyclane (QC) groups proceeded smoothly in the film state as in solution by UV irradiation. The rate of isomerization was affected by the structure of the main chain in the polymer and the substituent groups on NBD. The catalytic reversion of the resulting QC group to the original NBD proceeded smoothly in the presence of (5,10,15,20-tetraphenyl-21H,23H-porphine)cobalt(II) at room temperature.

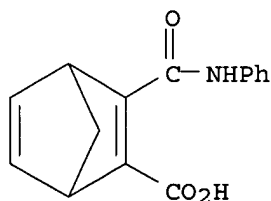
IT 137895-90-0DP, Potassium 3-(phenylcarbamoyl)-2,5-norbornadiene-2-carboxylate, reaction products with brominated poly(dimethylphenylene oxide)

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and photochem. valence isomerization of polyoxyphenylenes containing pendant norbornadiene groups)

RN 137895-90-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 13 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:681340 HCAPLUS

DN 121:281340

TI Synthesis and photochemical properties of solar energy storage-exchange polymers containing pendant norbornadiene moieties

AU Nishikubo, Tadatomi; Kameyama, Atsushi; Kishi, Katsuhiko; Mochizuki, Yasushi

CS Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan

SO Journal of Polymer Science, Part A: Polymer Chemistry (1994), 32(14), 2765-73

CODEN: JPACEC; ISSN: 0887-624X

DT Journal

LA English

AB New photoresponsive polymers (PRP) containing pendant norbornadiene (NBD) moieties with N,N-disubstituted amide groups were synthesized with 97, 98, 92, and 94% conversions by the substitution reaction of poly[(p-chloromethyl)styrene] with potassium salts of 3-piperidyloxo-2,5-NBD-2-carboxylic acid, 3-(N,N-dipropylcarbamoyl)-2,5-NBD-2-carboxylic acid, 3-(N-methyl-N-phenylcarbamoyl)-2,5-NBD-2-carboxylic acid, and 3-(N,N-diphenylcarbamoyl)-2,5-NBD-2-carboxylic acid, resp., using tetrabutylammonium bromide as a phase-transfer catalyst for all. Polymers PRP with N,N-disubstituted amide groups on the NBD moieties were

sensitized by adding appropriate photosensitizers such as Michler's ketone and 4-(N,N-dimethylamino)benzophenone in the film state, although the reactivities of the polymers without photosensitizer were lower than that of our previously reported polymer containing pendant 3-(N-phenylcarbamoyl)-2,5-NBD-2-carboxylate moiety. The photo-irradiated retaining PRP containing the corresponding quadricyclane moieties can be stored about 80-86 kJ/mol of their thermal energy.

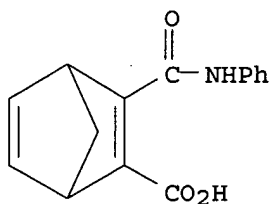
IT 78941-78-3P 98736-27-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; in preparation of solar energy storage-exchange polymers containing pendant norbornadiene moieties containing amide groups without imidization side reaction)

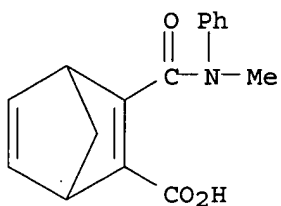
RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)



RN 98736-27-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(methylphenylamino)carbonyl]- (9CI) (CA INDEX NAME)



IT 137895-90-0DP, reaction products with poly(p-chloromethyl)styrene

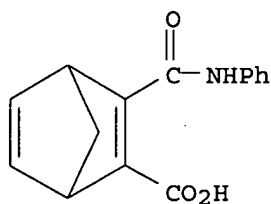
159091-04-0DP, reaction products with poly(p-chloromethyl)styrene

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis and photochem. properties of solar energy storage-exchange polymers containing pendant norbornadiene moieties containing amide groups without imidization side reaction)

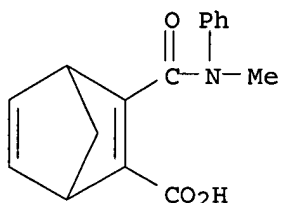
RN 137895-90-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

RN 159091-04-0 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-
 [(methylphenylamino)carbonyl]-, potassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 14 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1994:580326 HCAPLUS
 DN 121:180326
 TI New photoresponsive polymers bearing norbornadiene moiety. Synthesis by selective cationic polymerization of 2-(3-phenyl-2,5-norbornadiene-2-carboxyloxy)ethyl vinyl ether and photochemical reaction of the resulting polymers
 AU Nishikubo, T.; Kameyana, A.; Kishi, K.; Hijikata, C.
 CS Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan
 SO ACS Symposium Series (1994), 537(Polymer for Microelectronics), 356-69
 CODEN: ACSMC8; ISSN: 0097-6156
 DT Journal
 LA English
 AB New functional monomers such as 2-(3-phenyl-2,5-norbornadiene-2-ylcarbonyloxy)ethyl vinyl ether (PNVE), 2-[3-(phenylcarbamoyle)-2,5-norbornadiene-2-ylcarbonyloxy]ethyl vinyl ether (PCNVE), 2-(4-vinylbenzyloxycarbonyl)-3-phenyl-2,5-norbornadiene (VPNB), and 2-(4-vinylbenzyloxycarbonyl)-3-(phenylcarbamoyle)-2,5-norbornadiene (VPCNB) containing both polymerizable vinyl groups and photoresponsive norbornadiene (NBD) moieties were synthesized in high yields by the reaction of K 2,5-norbornadiene-2-carboxylates with 2-chloroethyl vinyl ether or p-(chloromethyl)styrene using a phase-transfer catalyst. Although cationic polymerization or copolymerization of PNVE proceeded successfully to give soluble polymers bearing NBD moieties in high yield without any gel products at -10 and -40° in CH₂Cl₂ solution, the cationic polymerization of PCNVE and VPCNB did not occur under similar conditions. Radical polymerization or

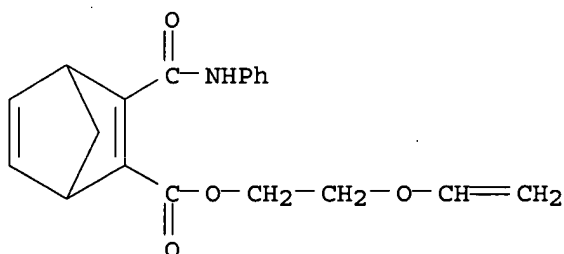
copolymn. of VPNB, VPCNB, and PCNVE was also tried in order to obtain the corresponding polymers with NBD moieties. However, soluble polymers were not obtained in high yield without gel production. Photochem. valence isomerization of NBD moiety in poly(PNVE) and the resulting quadricyclane group in the polymer were also investigated in the film state.

IT 142246-28-4P 157716-47-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)

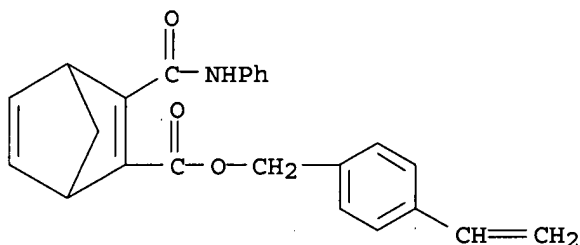
RN 142246-28-4 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, 2-(ethenyloxy)ethyl ester (9CI) (CA INDEX NAME)



RN 157716-47-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, (4-ethenylphenyl)methyl ester (9CI) (CA INDEX NAME)

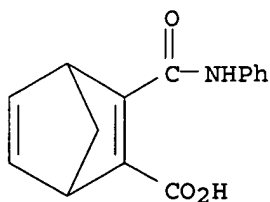


IT 137895-90-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloroethyl vinyl ether and chloromethylstyrene)

RN 137895-90-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



L118 ANSWER 15 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:410172 HCAPLUS

DN 121:10172

TI Synthesis of solar energy storage-exchange polymer containing chalcone type norbornadiene moiety and photochemical reaction of the resulting polymer

AU Kishi, Katsuhiko; Banno, Hitoshi; Kameyama, Atsushi; Nishikubo, Tadatomi

CS Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan

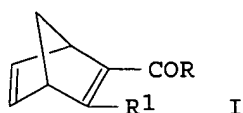
SO Kobunshi Ronbunshu (1994), 51(5), 295-302

CODEN: KBRBA3; ISSN: 0386-2186

DT Journal

LA Japanese

GI



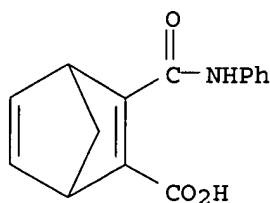
AB I (R = p-C₆H₄OK; R' = Ph) (II) was prepared and a polymer (III) was obtained from II and poly[p-(chloromethyl)styrene]. The photochem. activity of III was evaluated in the film state. The photochem. valence isomerization of III produced the corresponding quadricyclane (QC) groups with 60 s irradiation with a 500-W Xe lamp. The rate of photochem. valence isomerization of III polymer was higher than that of polymers based on I (R = OK; R' = Ph) or I (R = OK; R' = CONHPh) as chromophores. The reversion from the QC groups to norbornadiene (NBD) moieties in the polymers was carried out using 5,10,15,20-tetraphenyl-21H,23H-porphinecobalt(II) as a catalyst in THF solution. The catalytic reversion proceeded very smoothly. The thermal reversion from QC groups to NBD moieties in the film state also proceeded smoothly.

IT 137895-90-0DP, reaction products with poly[p-(chloromethyl)styrene]

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and photoisomerization of)

RN 137895-90-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 16 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

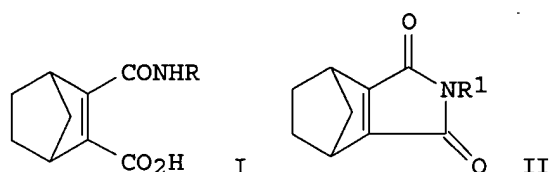
AN 1994:323182 HCAPLUS

DN 120:323182

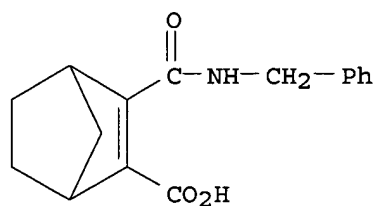
TI Antitumor agents II: synthesis and anticancer activity of dehydrogenated

carboncyclic analogs of norcantharidin

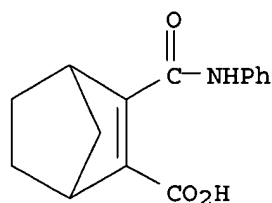
AU Fang, Y.; Tian, S. L.; Li, K. Q.; Zhao, S. W.; Wang, Z. Y.
 CS Natl. Inst. Pharm. Res. & Dev., Beijing, 102206, Peop. Rep. China
 SO Yaoxue Xuebao (1993), 28(12), 931-5
 CODEN: YHHPAL; ISSN: 0513-4870
 DT Journal
 LA Chinese
 GI



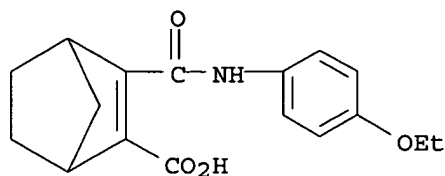
AB Title compds. I (R = H, alkyl, cyclohexyl, allyl, benzyl, Ph, substituted Ph) and II (R1 = Ph, substituted Ph) were prepared starting from Diels-Alder reaction of cyclopentadiene with acetylenedicarboxylic acid. II (R1 = 2-MeC6H4) showed anticancer activity comparable to that of norcantharidin.
 IT 155049-76-6 155049-78-8 155049-79-9
 155049-80-2 155049-81-3 155049-82-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and anticancer activity of)
 RN 155049-76-6 HCAPLUS
 CN Bicyclo[2.2.1]hept-2-ene-2-carboxylic acid, 3-
 [[(phenylmethyl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 155049-78-8 HCAPLUS
 CN Bicyclo[2.2.1]hept-2-ene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-
 (9CI) (CA INDEX NAME)

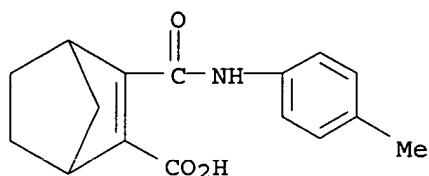


RN 155049-79-9 HCAPLUS
 CN Bicyclo[2.2.1]hept-2-ene-2-carboxylic acid, 3-[[4-ethoxyphenyl]amino]carbonyl]- (9CI) (CA INDEX NAME)



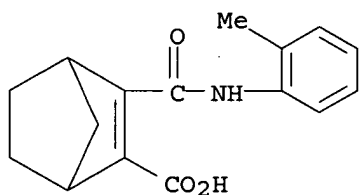
RN 155049-80-2 HCAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-carboxylic acid, 3-[[4-methylphenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



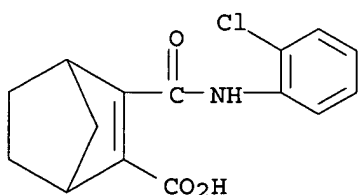
RN 155049-81-3 HCAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-carboxylic acid, 3-[[2-methylphenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



RN 155049-82-4 HCAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-carboxylic acid, 3-[[2-chlorophenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



L118 ANSWER 17 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:301053 HCAPLUS

DN 120:301053

TI Fibrous materials with latent heat by solar light absorption and their manufacture

IN Kyokawa, Hiroshi

PA Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

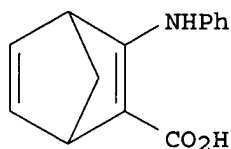
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05311579	A2	19931122	JP 1992-139722	19920501 <--
PRAI	JP 1992-139722		19920501	<--	
OS	MARPAT 120:301053				
AB	<p>The title materials are prepared by coating fabrics with compns. comprising microcapsules containing norbornadiene derivs. (A) with a specified structure and catalysts and polymer binders or sandwiching mixts. of A and catalysts between a fabric and a plastic film or forming hollow sheath-core bicomponent fibers with the core or hollow portion containing A and catalysts. The fabrics are useful for insulative garments. A fabric was coated with a composition comprising a binder and microcapsules containing 500:1 (mole ratio) mixture of 2-carboxy-3-amido-2,5-norbornadiene and a Co compound catalyst and iso-PROH to give a coated fabric exhibiting light absorption by sunlight and heat evolution without sunlight.</p>				
IT	<p>155048-32-1 RL: USES (Uses) (synthetic fibers containing or coatings on fabrics containing, for latent heat by solar light absorption)</p>				
RN	155048-32-1 HCAPLUS				
CN	Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-(phenylamino)- (9CI) (CA INDEX NAME)				



L118 ANSWER 18 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1993:518013 HCAPLUS

DN 119:118013

TI Synthesis of polymers bearing pendant norbornadiene moieties by addition reaction of poly(glycidyl methacrylate-co-methyl methacrylates) with 2,5-norbornadiene-2-carboxylic acids

AU Nishikubo, Tadatomi; Kawashima, Tatsuo; Watanabe, Sadayuki

CS Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan

SO Journal of Polymer Science, Part A: Polymer Chemistry (1993), 31(7), 1659-65

CODEN: JPACEC; ISSN: 0887-624X

DT Journal

LA English

AB Polymers bearing photoresponsive norbornadiene (I) moieties were synthesized by the addition reaction of poly(glycidyl methacrylate-co-Me methacrylate)s containing pendent epoxide groups with 3-phenyl-2,5-norbornadiene-2-carboxylic acid (II), 3-[(phenyl)carbamoyl]-2,5-norbornadiene-2-carboxylic acid (III), 3-[(4-acetylphenyl)carbamoyl]-2,5-norbornadiene-2-carboxylic acid (IV), and 3-[(4-methoxyphenyl)carbamoyl]-2,5-norbornadiene-2-carboxylic acid (V) using Bu₄NBr as a catalyst in DMF. The polymers bearing pendent II or IV moieties have higher photochem. reactivity in the film state than the polymers bearing pendent III or V moieties. Although the pendent quadricyclane (QC) group produced by the photoirradn. of the II moiety in these polymers has excellent storage stability in the film state with no catalyst at room temperature, the QC group in the polymer film with the catalyst reverts gradually to the I moiety at room temperature

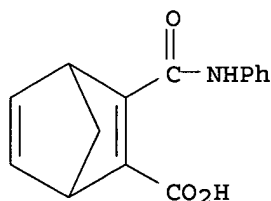
IT 78941-78-3 79632-15-8

RL: USES (Uses)

(esterification of glycidyl methacrylate-Me methacrylate copolymer with)

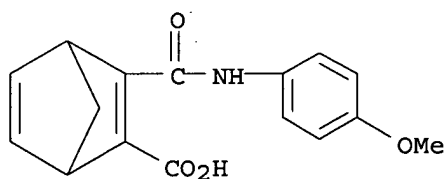
RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)



RN 79632-15-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L118 ANSWER 19 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1993:125298 HCAPLUS

DN 118:125298

TI Preparation of heat-resistant pendant norbornadienyl group-containing polymers as light energy-converting substance

IN Nishikubo, Tatatomi; Iizawa, Koji

PA Research Development Corp. of Japan, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04239025	A2	19920826	JP 1991-1725	19910110 <--
	JP 3083162	B2	20000904		
PRAI	JP 1991-1725		19910110 <--		

AB The title polymers are prepared by introduction of norbornadiene derivs. into Me groups of poly[oxy(2,6-dimethyl-1,4-phenylene)] (I). Thus, reacting 1.5 mmol brominated I (Br 0.44 mol%) with 1.5 mmol K 3-phenylcarbamoyl norbornadiene-2-carboxylate gave a polymer showing good reproducibility under photo and thermal (160°) isomerization cycles.

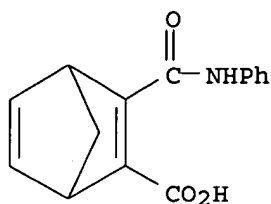
IT 137895-90-0DP, reaction products with brominated poly[oxy(dimethylphenylene)]

RL: PREP (Preparation)

(preparation of, as light energy-converting substances, heat-resistant)

RN 137895-90-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 20 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:427466 HCAPLUS

DN 117:27466

TI Preparation of norbornadienylcarbonyloxyethyl vinyl ethers and their polymers

IN Matsumoto, Takeshi; Fukutome, Toshiyuki; Nishikubo, Tatatomi

PA Nisso Maruzen Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

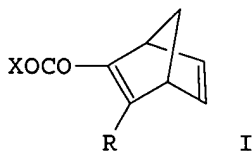
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04018052	A2	19920122	JP 1990-118818	19900510 <--
	JP 2832858	B2	19981209		
PRAI	JP 1990-118818		19900510	<--	
OS	MARPAT 117:27466				
GI					



AB The title ethers I (X = H₂C:CHOCH₂CH₂; R = H, CO₂R₁, Ph, CONR₂-p-C₆H₄R₃; R₁ = Me, Et; R₂ = H, Me, Et; R₃ = H, Ac) are prepared from H₂C:CHOCH₂CH₂Cl (II) and I (X = alkali metal) and (co)polymerized by reaction of the vinyl group, giving polymers for use as optical energy storage materials, optical memory devices, and photochromic materials. Refluxing 7.52 g I (X = K; R = Ph) with 31.97 g II in presence of Bu₄NBr for 5 h gave 7.06 g I (R = Ph) which (4.52 g) was polymerized in PhMe in presence of BF₃.Et₂O and Et₃N to give 91% polymer with photoisomerization capability.

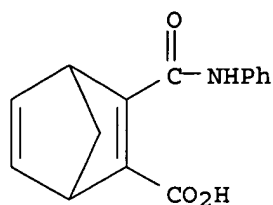
IT 78941-78-3P

RL: PREP (Preparation)

(preparation and esterification with vinyloxyethyl chloride)

RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)



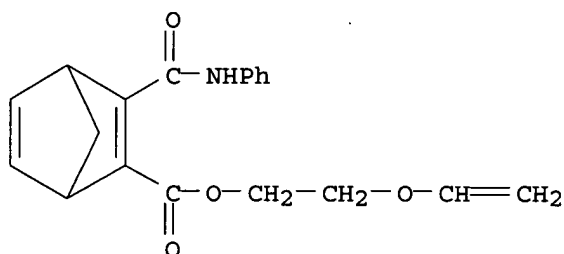
IT 142246-28-4P 142246-29-5P

RL: PREP (Preparation)

(preparation of polymerizable)

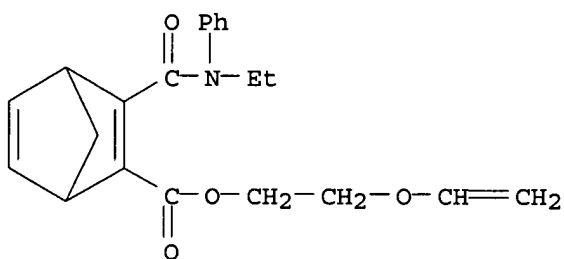
RN 142246-28-4 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, 2-(ethenyloxy)ethyl ester (9CI) (CA INDEX NAME)



RN 142246-29-5 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(ethylphenylamino)carbonyl]-, 2-(ethenyloxy)ethyl ester (9CI) (CA INDEX NAME)



L118 ANSWER 21 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:21635 HCAPLUS

DN 116:21635

TI Synthesis and solar energy storage property of polymers containing norbornadiene moieties

AU Iizawa, Takashi; Hijikata, Chikara; Nishikubo, Tadatomi

CS Fac. Eng., Hiroshima Univ., Higashi-Hiroshima, 724, Japan

SO Macromolecules (1992), 25(1), 21-6

CODEN: MAMOBX; ISSN: 0024-9297

DT Journal

LA English

AB Polymers having a pendant 3-[(p-substituted phenyl)carbamoyl]-2,5-norbornadiene-2-carboxylate moiety and their model compds. were prepared from the reaction of poly[4-(chloromethyl)styrene] and BzCl with corresponding K salts using phase-transfer catalyst in DMF, resp. The photochem. valence isomerization of pendant norbornadiene (NBD) to the

quadricyclane (QC) moiety proceeded smoothly in the film state or polymer solution upon irradiation by sunlight or high-pressure mercury lamp. The rate of

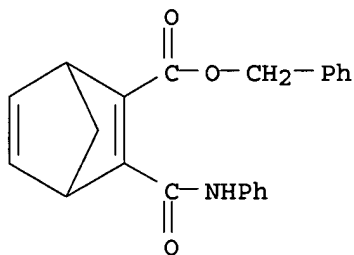
isomerization was strongly affected by the substituent of the [(p-substituted phenyl)carbamoyl]-2,5-norbornadiene-2-carboxylate moiety in the polymers. The rate of photochem. reaction in the polymer solution was much higher than that of the corresponding model compds. On the other hand, the resulting QC groups in the polymer film scarcely reverted to the original NBD without any catalyst if it were kept in dark at room temperature for a long time. However, the reversion proceeded smoothly when (5,10,15,20-tetraphenyl-21H,23H-porphine)cobalt(II) was added to the polymer solution as a catalyst.

IT 137895-96-6P 137895-97-7P 137895-98-8P
137895-99-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and photoisomerization of, as model for norbornadiene-pendant polymers)

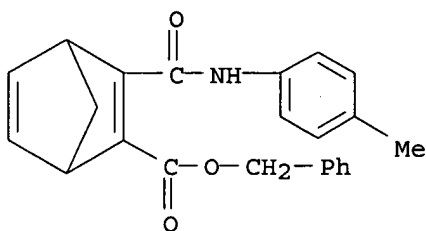
RN 137895-96-6 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)



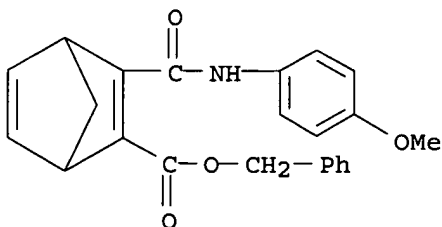
RN 137895-97-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methylphenyl)amino]carbonyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

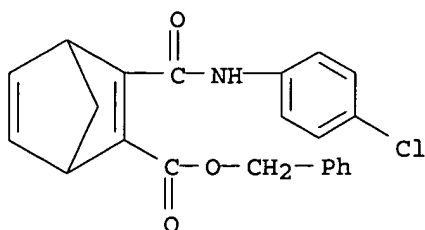


RN 137895-98-8 HCAPLUS

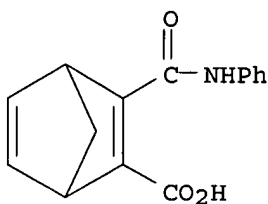
CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl)amino]carbonyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)



RN 137895-99-9 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[[4-chlorophenyl)amino]carbonyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

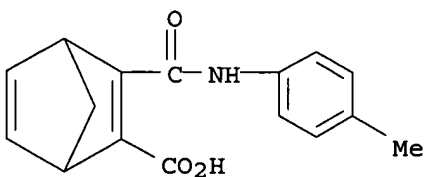


IT 137895-90-0DP, reaction products with poly(p-chloromethylstyrene)
 137895-91-1DP, reaction products with poly(p-chloromethylstyrene)
 137895-92-2DP, reaction products with poly(p-chloromethylstyrene)
 137895-93-3DP, reaction products with poly(p-chloromethylstyrene)
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and photoisomerization of, to quadricyclane-pendant moiety,
 solar storage energy in relation to)
 RN 137895-90-0 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



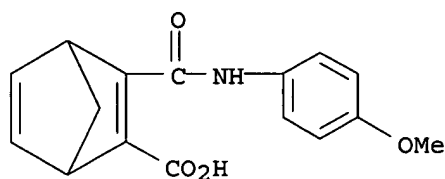
● K

RN 137895-91-1 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[[4-methylphenyl)amino]carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



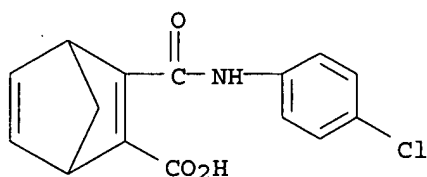
● K

RN 137895-92-2 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[[4-methoxyphenyl)amino]carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

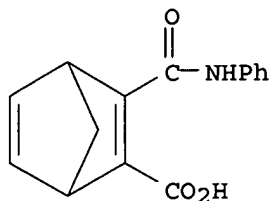
RN 137895-93-3 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-chlorophenyl]amino]carbonyl]-, monopotassium salt (9CI) (CA INDEX NAME)



● K

L118 ANSWER 22 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1991:156259 HCAPLUS
 DN 114:156259
 TI Kinetic spectrophotometric determination of tetraphenylporphinecobalt(II) based on photochromism of immobilized norbornadiene
 AU Kawabata, Yuji; Kumoyama, Hanako; Imasaka, Totaro; Ishibashi, Nobuhiko
 CS Fac. Eng., Kyushu Univ., Hakozaki, 812, Japan
 SO Analytica Chimica Acta (1991), 243(1), 97-101
 CODEN: ACACAM; ISSN: 0003-2670
 DT Journal
 LA English
 AB The Co(TPP) (H2TPP = tetraphenylporphine) is detected spectrophotometrically by its catalysis of a photochromic isomerism of 3-(phenylcarbamoyl)norbornadiene (NBD). NBD is immobilized on aminopropyl derivs. of porous glass beads, and is isomerized to a quadricyclane (QC) by UV irradiation. The beads are then immersed in a solution containing Co(TPP), and the QC is converted back to NBD by a catalytic reaction with Co(TPP). The rate constant, measured spectrophotometrically, is proportional to the concentration of Co(TPP). The detection limit of Co(TPP) is 60 μ M for a reaction period of 1 h. This spectrophotometric detection can be applied repetitively without any supply of the chemical reagent, as NBD immobilized on the porous glass beads can be re-isomerized to QC by UV irradiation.
 IT 78941-78-3D, reaction products with aminopropyl-bonded porous glass beads in presence of condensing agents
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photochem. isomerization of, in (porphinato)cobalt(II) determination by catalytic spectrophotometry)
 RN 78941-78-3 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-

(9CI) (CA INDEX NAME)



L118 ANSWER 23 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1988:185853 HCAPLUS

DN 108:185853

TI Preparation of enamines as prodrugs

PA Merck and Co., Inc., USA

SO Jpn. Kokai Tokkyo Koho, 14 pp.

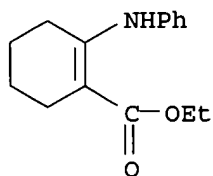
CODEN: JKXXAF

DT Patent

LA Japanese

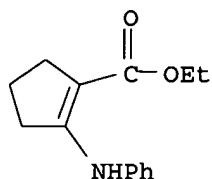
FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62033140	A2	19870213	JP 1986-177879	19860730 <--
	EP 214009	A2	19870311	EP 1986-401678	19860728 <--
	EP 214009	A3	19890111		
	R: CH, DE, FR, GB, IT, LI, NL				
PRAI	US 1985-760423	A	19850730	<--	
GI	For diagram(s), see printed CA Issue.				
AB	Enamines I, II, and III (R1R2N = primary or secondary amine residues; R3, R4 = C1-6 alkyl, C6-10 aryl, C7-12 aralkyl, C3-10 cycloalkenyl, C2-20 alkenyl, mono-, di-, or triheterocyclyl containing ≥1 N, O, S.; R5 = H, C1-8 alkyl), useful as prodrugs, are prepared Treatment of 1-(N-morpholino)-1-cyclohexene with ClCO2Et gave 40% Et 2-oxocyclohexane-1-carboxylate (IV) which was treated with PhNH2 in C6H6 to afford 40.8% enamine III (R1 = H; R2 = Ph; R3 = Et; m = 4) (V). V was hydrolyzed by pig liver esterase and the products are PhNH2 and IV, vs. no hydrolysis for 4-(N-phenylamino)-3-pentene-2-one by the esterase.				
IT	38778-79-9P 52909-66-7P				
	RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as prodrug)				
RN	38778-79-9 HCAPLUS				
CN	1-Cyclohexene-1-carboxylic acid, 2-(phenylamino)-, ethyl ester (9CI) (CA INDEX NAME)				

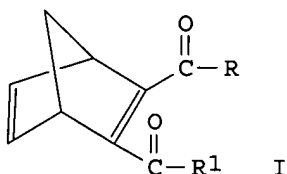


RN 52909-66-7 HCAPLUS

CN 1-Cyclopentene-1-carboxylic acid, 2-(phenylamino)-, ethyl ester (9CI) (CA INDEX NAME)



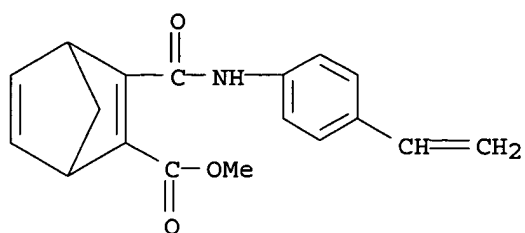
L118 ANSWER 24 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1988:168043 HCAPLUS
 DN 108:168043
 TI Photoresponsive vinyl polymer bearing norbornadiene as a pendant group
 AU Kamogawa, Hiroyoshi; Yamada, Makoto
 CS Dep. Appl. Chem., Yamanashi Univ., Kofu, 400, Japan
 SO Macromolecules (1988), 21(4), 918-23
 CODEN: MAMOBX; ISSN: 0024-9297
 DT Journal
 LA English
 GI



AB Homopolymers of I ($R = \text{OCH}_2\text{-p-C}_6\text{H}_4\text{CH:CH}_2$, $\text{NH-m-C}_6\text{H}_4\text{CH:CH}_2$, $\text{NH-p-C}_6\text{H}_4\text{CH:CH}_2$; $R' = \text{OMe}$, $\text{OCH}_2\text{-p-C}_6\text{H}_4\text{Me}$, $\text{NH-m-C}_6\text{H}_4\text{Me}$, $\text{NH-p-C}_6\text{H}_4\text{Me}$) were prepared by radical polymerization, and the changes in their UV spectra upon UV irradiation under N atmospheric were studied. The norbornadiene group in the polymer was converted to a quadricyclane group upon UV irradiation at $>310\text{ nm}$ and was converted back to the norbornadiene group at 250 nm . Polymers bearing an amide substituent at the 2-position exhibited a higher photosensitivity in the solid state and a larger red shift in the absorption spectrum than those bearing a carboxylate substituent.

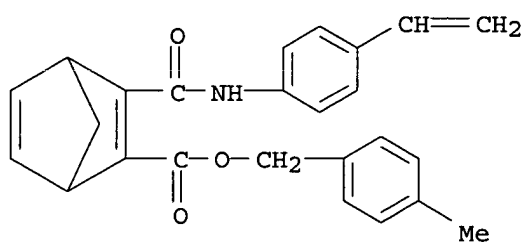
IT 113008-91-6P 113008-93-8P 113008-95-0P
 113008-97-2P 113008-99-4P 113009-01-1P
 113009-03-3P 113009-05-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and polymerization of)

RN 113008-91-6 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-ethenylphenyl)amino]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



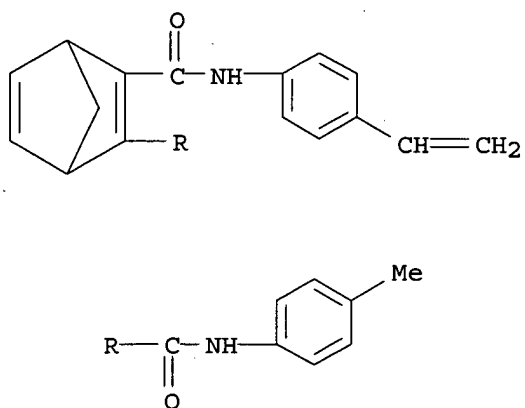
RN 113008-93-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-ethenylphenyl)amino]carbonyl]-, (4-methylphenyl)methyl ester (9CI) (CA INDEX NAME)



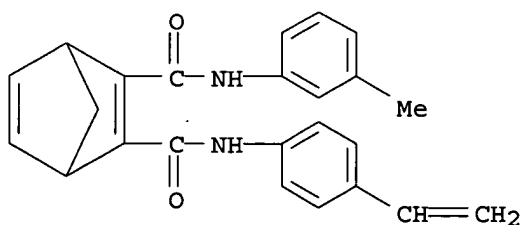
RN 113008-95-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N-(4-ethenylphenyl)-N'-(4-methylphenyl)- (9CI) (CA INDEX NAME)



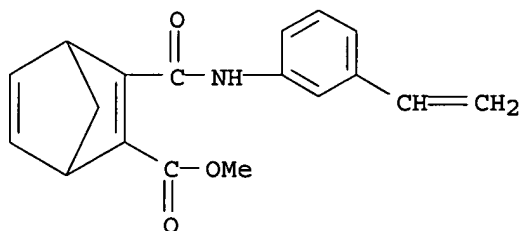
RN 113008-97-2 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N-(4-ethenylphenyl)-N'-(3-methylphenyl)- (9CI) (CA INDEX NAME)



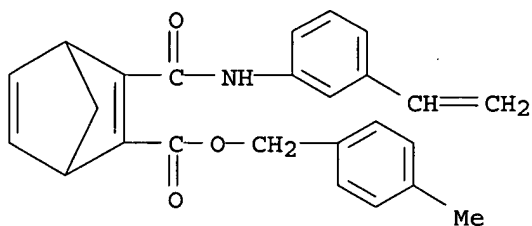
RN 113008-99-4 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[3-ethenylphenyl)amino]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



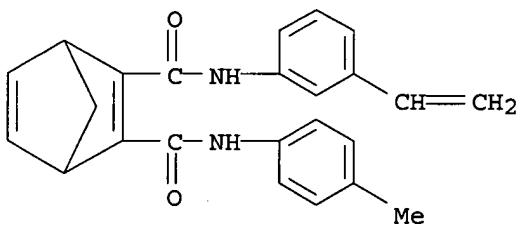
RN 113009-01-1 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[3-ethenylphenyl)amino]carbonyl]-, (4-methylphenyl)methyl ester (9CI) (CA INDEX NAME)



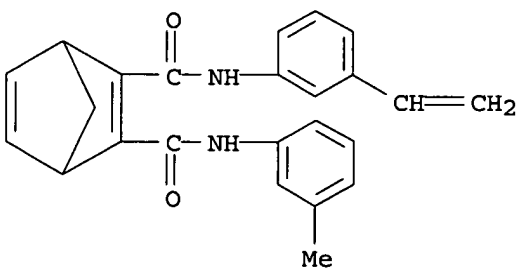
RN 113009-03-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N-(3-ethenylphenyl)-N'-(4-methylphenyl)- (9CI) (CA INDEX NAME)

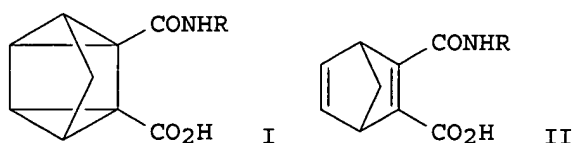


RN 113009-05-5 HCAPLUS

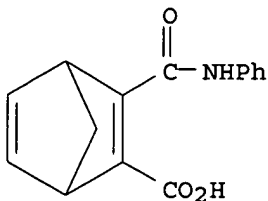
CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N-(3-ethenylphenyl)-N'-(3-methylphenyl)- (9CI) (CA INDEX NAME)



L118 ANSWER 25 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1986:608267 HCAPLUS
DN 105:208267
TI Exothermic isomerization of water-soluble quadricyclanes to norbornadienes by soluble and insoluble catalysts
AU Maruyama, Kazuhiro; Tamiaki, Hitoshi; Kawabata, Shigeki
CS Dep. Chem., Kyoto Univ., Kyoto, 606, Japan
SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1986), (4), 543-9
CODEN: JCPKBH; ISSN: 0300-9580
DT Journal
LA English
GI



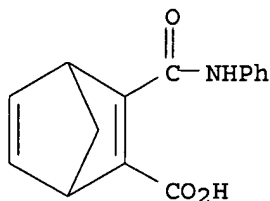
AB H₂O-soluble quadricyclanes I (R = Me, Ph) were stable in aqueous Na₂CO₃ solution, but addition of a catalytic amount of a H₂O-soluble Co porphyrin complexes induced rapid and quant. isomerization of I to norbornadiene derivs. II with release of heat. Insol. catalysts prepared by adsorption of Co-TPP or Co-Pc (TPP = 5,10,15,20-tetraphenylporphyrin dianion; Pc = phthalocyanine dianion) on activated C were as active as the soluble analogs. They retained their activity after use, and could be recycled.
IT 78941-78-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by cobalt porphyrin-catalyzed isomerization of quadricyclane)
RN 78941-78-3 HCAPLUS
CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-(9CI) (CA INDEX NAME)



L118 ANSWER 26 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1986:450862 HCAPLUS
DN 105:50862
TI Electrochemical conversion of a quadricyclane to a norbornadiene
IN Gassman, Paul G.; Hershberger, James W.
PA University of Minnesota, USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4582578	A	19860415	US 1985-762111	19850802 <--
	CA 1277949	A1	19901218	CA 1986-514209	19860718 <--
	IL 79475	A1	19910816	IL 1986-79475	19860721 <--
	AU 8660461	A1	19870205	AU 1986-60461	19860723 <--
	AU 596045	B2	19900412		
	JP 62063693	A2	19870320	JP 1986-179813	19860730 <--
PRAI	US 1985-762111	A	19850802	<--	
AB	A method for the electrochem. isomerization of a quadricyclane to a norbornadiene with the net release of thermal energy comprises: (a) forming an electroconductive solution comprising quadricyclane and a neutral carrier oxidant compound such as a triarylamine; (b) oxidizing the carrier oxidant compound to the corresponding cation radical by applying an anodic potential to the solution; (c) oxidizing quadricyclane to the corresponding quadricyclane radical by means of a single electron transfer from quadricyclane to the cation radical of the oxidant compound, in which the quadricyclane radical spontaneously isomerizes to the norbornadiene radical with the liberation of thermal energy; and (d) reducing the norbornadiene cation radical to the corresponding norbornadiene with the liberation of thermal energy. The isomerization reaction can be stopped instantly by the application of a cathodic potential and restarted by reapplication of the anodic potential, and systems employing this reaction can be used for solar energy storage and release.				
IT	78941-78-3P				
	RL: PREP (Preparation) (preparation of, electrochem., from the corresponding quadricyclane)				
RN	78941-78-3 HCAPLUS				
CN	Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)				



L118 ANSWER 27 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1986:148368 HCAPLUS

DN 104:148368

TI Development of a solar energy storage process. Photoisomerization of a norbornadiene derivative to a quadricyclane derivative in an aqueous alkaline solution

AU Maruyama, Kazuhiro; Tamiaki, Hitoshi; Kawabata, Shigeki

CS Fac. Sci., Kyoto Univ., Kyoto, 606, Japan

SO Journal of Organic Chemistry (1985), 50(24), 4742-9

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

OS CASREACT 104:148368

GI

AB Aqueous alkaline norbornadiene derivs. I (R = R1 = H, Me; R = H, R1 = Me, PhCH2, CMe3, Ph; RNR1 = pyrrolidino) are quant. valence isomerized to the corresponding quadricyclanes II, in air, on irradiation by sunlight. The cyclopropane and cyclobutane rings of II are usually reactive with H2O; this is not observed here but I (R = Me, R1 = Ph, R = R1 = Ph; RNR1 = indolino) give undesirable compds. under these conditions. The linked analogs III, IV, and V of I are also prepared; they are as photoreactive as I and have increased solubility and higher heat storage ability than I. These compds. are potentially useful for solar energy storage.

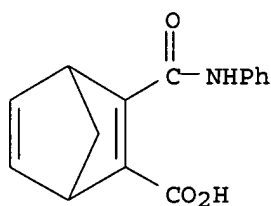
IT 78941-78-3

RL: PROC (Process)

(UV and photoisomerization of)

RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)



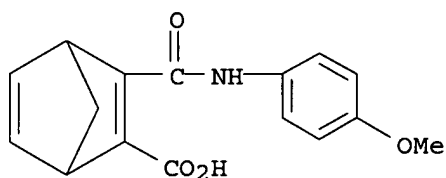
IT 79632-15-8 96627-81-5 96627-82-6

RL: PROC (Process)

(photoisomerization of)

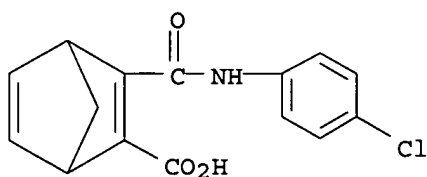
RN 79632-15-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl)amino]carbonyl]- (9CI) (CA INDEX NAME)



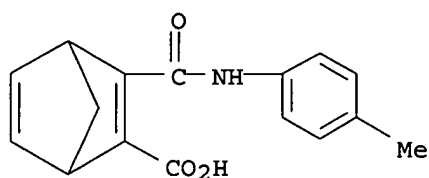
RN 96627-81-5 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-chlorophenyl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 96627-82-6 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methylphenyl)amino]carbonyl]- (9CI) (CA INDEX NAME)



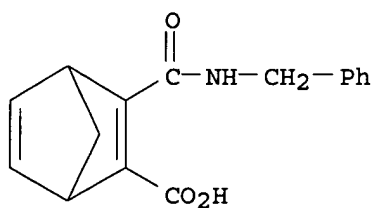
IT 98736-24-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and photochem. isomerization of)

RN 98736-24-4 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[phenylmethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

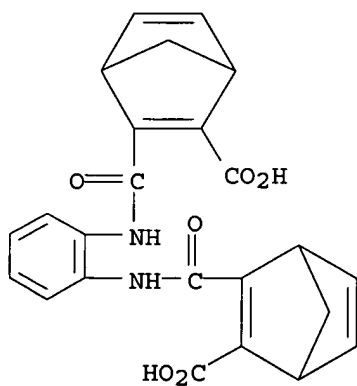


IT 84293-21-0P 84293-22-1P 98736-27-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and photoisomerization of)

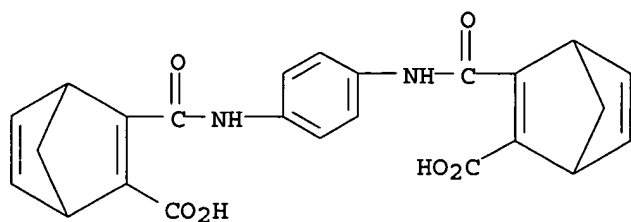
RN 84293-21-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[1,2-phenylenebis(iminocarbonyl)]bis- (9CI) (CA INDEX NAME)

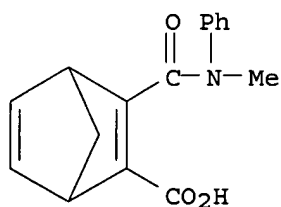


RN 84293-22-1 HCAPLUS

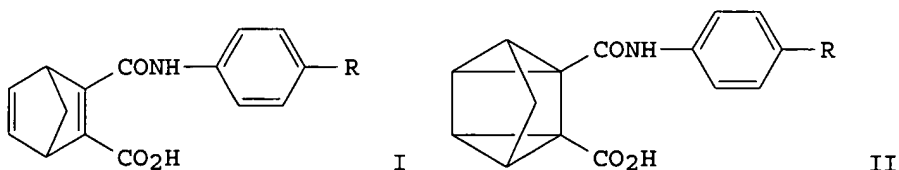
CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[1,4-phenylenebis(iminocarbonyl)]bis- (9CI) (CA INDEX NAME)



RN 98736-27-7 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-
 [(methoxyphenylamino)carbonyl]- (9CI) (CA INDEX NAME)



L118 ANSWER 28 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1985:220277 HCAPLUS
 DN 102:220277
 TI Valence isomerization between water-soluble norbornadiene and
 quadricyclane derivative
 AU Maruyama, Kazuhiro; Tamiaki, Hitoshi; Yanai, Tetsuya
 CS Fac. Sci., Kyoto Univ., Kyoto, 606, Japan
 SO Bulletin of the Chemical Society of Japan (1985), 58(2), 781-2
 CODEN: BCSJA8; ISSN: 0009-2673
 DT Journal
 LA English
 GI



AB Photoisomerization of norbornadienecarboxylic acids I (R = H, Cl, Me, MeO)
 to the corresponding quadricyclanes II (same R) in aqueous-alkaline solution
 was

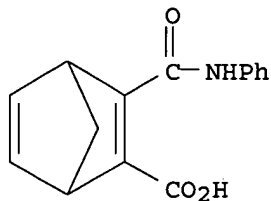
clean and dependent on the para substitution of the aryl group. Rate
 consts. for the Co 5,10,15,20-tetrakis(p-carboxyphenyl)porphyrin-catalyzed
 valence isomerization II → I were determined

IT 78941-78-3 79632-15-8 96627-81-5
 96627-82-6

RL: RCT (Reactant); RACT (Reactant or reagent)
 (photochem. valence isomerization of)

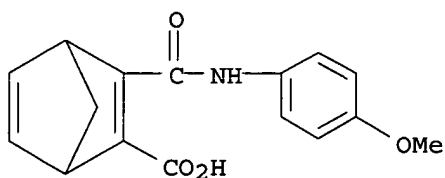
RN 78941-78-3 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-

(9CI) (CA INDEX NAME)



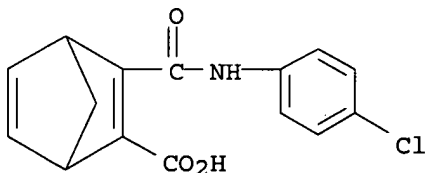
RN 79632-15-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



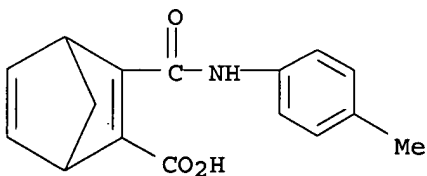
RN 96627-81-5 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-chlorophenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



RN 96627-82-6 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methylphenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



L118 ANSWER 29 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:423039 HCAPLUS

DN 101:23039

TI Acceleration of valence isomerism

PA Nard Institute Ltd., Japan; Maruyama, Kazuhiro

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI	JP 59020261	A2	19840201	JP 1982-129150	19820724 <--
	JP 03015626	B4	19910301		
PRAI	JP 1982-129150		19820724	<--	
GI					



I



II

AB Norbornadiene (I) or its derivs. having substituents at position 2,3,5, or 6 were prepared by valency isomerism of quadricyclane (II) or its derivs. in the presence of metal complexes of H₂O-soluble porphyrins or phthalocyanines. Thus, an aqueous mixture of 10.5 mg 3-phenylcarbamoylquadricyclane-2-carboxylic acid and 0.21 mol Na₂CO₃ was kept at ordinary temps. in the presence of Co complex of hematoporphyrin to give 10.5 mg 3-phenylcarbamoylnorbornadiene-2-carboxylic acid. Ten addnl. norbornadienes were similarly prepared

IT 78941-78-3P 79632-14-7P 79632-15-8P

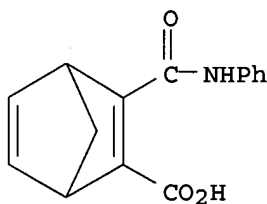
79632-18-1P 79632-19-2P 84293-22-1P

90687-79-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

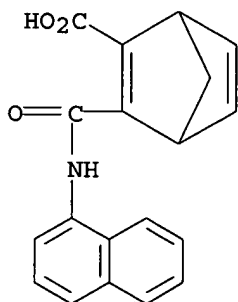
RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-
(9CI) (CA INDEX NAME)



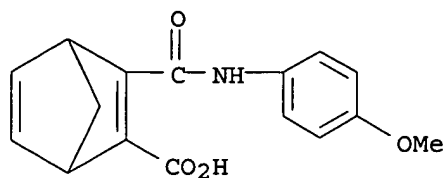
RN 79632-14-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(1-naphthalenylamino)carbonyl]- (9CI) (CA INDEX NAME)



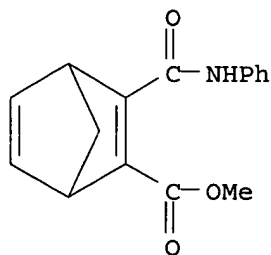
RN 79632-15-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl]amino]carbonyl]- (9CI) (CA INDEX NAME)



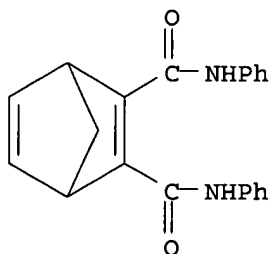
RN 79632-18-1 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



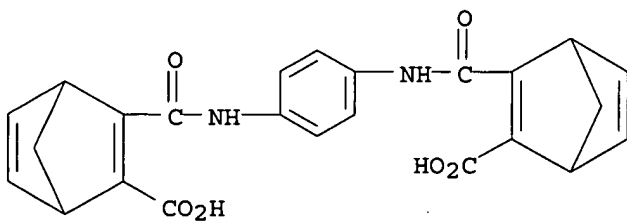
RN 79632-19-2 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N,N'-diphenyl- (9CI) (CA INDEX NAME)



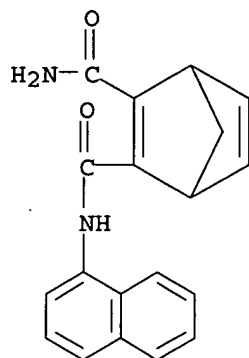
RN 84293-22-1 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[1,4-phenylenebis(iminocarbonyl)]bis- (9CI) (CA INDEX NAME)



RN 90687-79-9 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N-1-naphthalenyl- (9CI) (CA INDEX NAME)



L118 ANSWER 30 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:5941 HCAPLUS

DN 100:5941

TI Valence isomerization between norbornadienes and quadricyclanes

PA Maruyama, Kazuhiro, Japan; Nado Kenkyusho, Ltd.

SO Jpn. Kokai Tokkyo Koho, 10 pp.

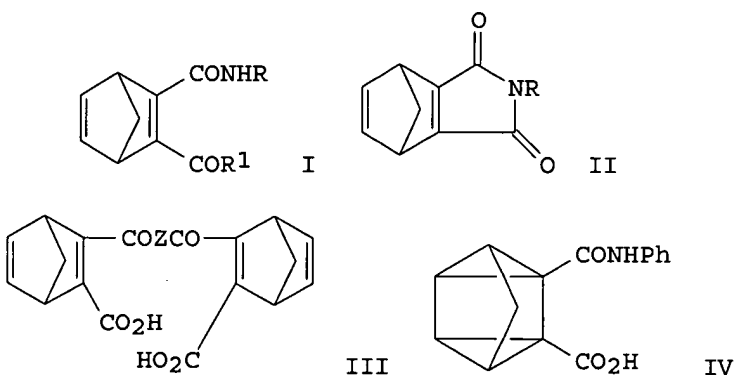
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58110550	A2	19830701	JP 1981-214186	19811224 <--
	JP 02017535	B4	19900420		
PRAI	JP 1981-214186		19811224	<--	
GI					

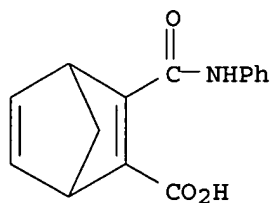


AB Norbornadienes I (R = Ph, p-methoxyphenyl, 1-naphthyl, CMe₃; R₁ = OH, OMe, NHPh), II (R = Ph, 1-naphthyl), or III (Z = p-phenylene, CH₂CH₂) underwent photochem. isomerization to corresponding quadricyclanes, e.g. IV. This required no photosensitizer and the isomerization was reversed with Rh₂(CO)₄Cl₂ or by pyrolysis. Thus, norbornadiene-2,3-dicarboxylic anhydride treated with equimol. PhNH₂ in CH₂Cl₂ at 0° gave 93% I (R = Ph, R₁ = OH), which was dissolved in MeCN and exposed to a 300-W high-pressure Hg lamp for 5-20 h to give .apprx.100% IV.

IT 78941-78-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and valence isomerization of)

RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-
(9CI) (CA INDEX NAME)

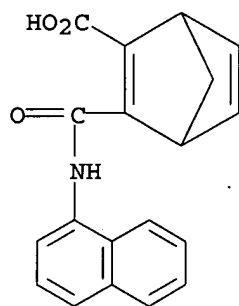
IT 79632-14-7P 79632-15-8P 79632-18-1P

79632-19-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

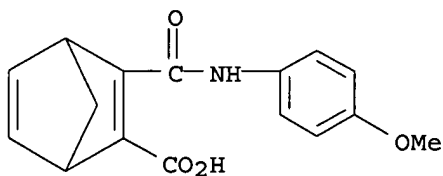
RN 79632-14-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(1-naphthalenylamino)carbonyl]- (9CI) (CA INDEX NAME)



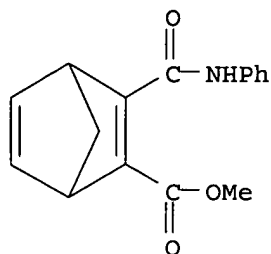
RN 79632-15-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[[4-methoxyphenyl)amino]carbonyl]- (9CI) (CA INDEX NAME)

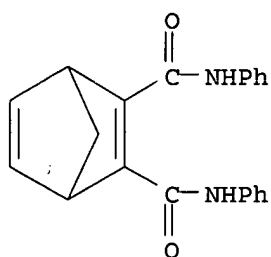


RN 79632-18-1 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-
, methyl ester (9CI) (CA INDEX NAME)



RN 79632-19-2 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N,N'-diphenyl- (9CI) (CA INDEX NAME)



L118 ANSWER 31 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:57162 HCAPLUS

DN 98:57162

TI A water-soluble solar energy storage system

AU Maruyama, Kazuhiro; Tamiaki, Hitoshi

CS Fac. Sci., Kyoto Univ., Kyoto, 606, Japan

SO Chemistry Letters (1982), (11), 1699-702

CODEN: CMLTAG; ISSN: 0366-7022

DT Journal

LA English

AB In an alkaline aqueous solution, photochem. valence isomerization of norbornadiene

derivs. to quadricyclane derivs. occurred quant., and reverse isomerization under release of heat was achieved by catalytic action of Co hematoporphyrin [29497-66-3] and analogs. This system may be of great practical use for solar-energy storage.

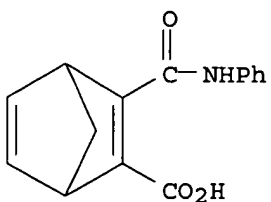
IT 78941-78-3 84293-21-0 84293-22-1

RL: PROC (Process)

(for solar energy storage, photoisomerization of, cobalt hematoporphyrin and analogs in)

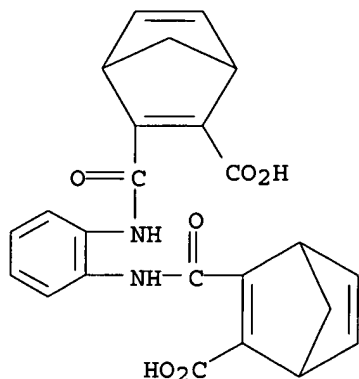
RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)



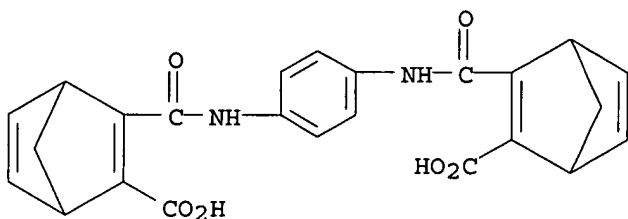
RN 84293-21-0 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[1,2-phenylenebis(iminocarbonyl)]bis- (9CI) (CA INDEX NAME)



RN 84293-22-1 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3,3'-[1,4-phenylenebis(iminocarbonyl)]bis- (9CI) (CA INDEX NAME)



L118 ANSWER 32 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1982:162225 HCAPLUS

DN 96:162225

TI Paramagnetically induced NMR shifts. IX. Syntheses and properties of highly substituted vinamidines

AU Knorr, Rudolf; Weiss, Alfons

CS Inst. Org. Chem., Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.

SO Chemische Berichte (1982), 115(1), 139-60

CODEN: CHBEAM; ISSN: 0009-2940

DT Journal

LA German

OS CASREACT 96:162225

AB R1N:LiCR2:CHR3 [R1 = Ph, 3,5-Me2C6H3; R2 = Me, Et, Pr, CMe3, pentyl, Ph; R3 = Me, 1-cyclohexen-1-yl, (un)substituted Ph, Et, 1-naphthyl, PhO, PhS, H, Bu, CH:NPh; R2R3 = (CH2)n (n = 3,4,5,6,10), CH2CH2CHMeCH2, o-C6H4CH2CH2, o-C6H4CH2, bicyclo[2.2.2]oct-2-en-2-yl and 2,5-diene isomers], prepared in situ from R1N:CR2CH2R3, (Me2CH)2NH, and MeLi, reacted with R4R5C:NR1 (R4 = H, Me, CMe3, Et, Pr, Ph; R5 = alkoxy, Cl) to give vinamidines R1NHCR2:CR3CR4:NR1, R1N:CR2CR3:CR4NHR1.HClO4, and R1N:CR2CR3:CR4NHR1 or their tautomers R1N:CR2CHR3CR4:NR1. This α -iminoalkylation corresponds in its regioselectivity to the anionization of R1N:CR2CH2R3. N-Acylations to give amidine derivs. are competing reactions and secondary reactions may lead to triacyl methanes, such as PhNHC(Et):C(CH:NPh)CH:NPh, PhNHCH:C(CEt:NPh)CH:NPh, PhNHCH:C(COEt)CH:NPh, and PhNHCH:C(CH:NPh)CH:NPh. The tautomeric and conformational equilibrium of the products are substituent dependent.

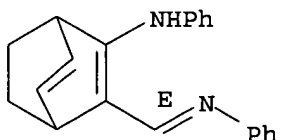
IT 81067-15-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and hydrogenation of)

RN 81067-15-4 HCAPLUS

CN Bicyclo[2.2.2]octa-2,5-dien-2-amine, N-phenyl-3-[(phenylimino)methyl]-,
(E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 81067-16-5P 81067-21-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 81067-16-5 HCAPLUS

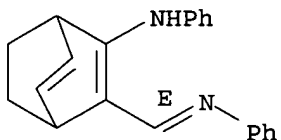
CN Bicyclo[2.2.2]octa-2,5-dien-2-amine, N-phenyl-3-[(phenylimino)methyl]-,
(E)-, monoperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 81067-15-4

CMF C21 H20 N2

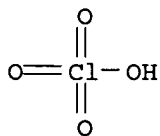
Double bond geometry as shown.



CM 2

CRN 7601-90-3

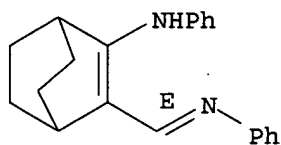
CMF Cl H O4



RN 81067-21-2 HCAPLUS

CN Bicyclo[2.2.2]oct-2-en-2-amine, N-phenyl-3-[(phenylimino)methyl]-, (E)-
(9CI) (CA INDEX NAME)

Double bond geometry as shown.



L118 ANSWER 33 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:606796 HCAPLUS

DN 95:206796

TI Exploitation of solar energy storage systems. Valence isomerization between norbornadiene and quadricyclane derivatives

AU Maruyama, Kazuhiro; Terada, Kazutoshi; Yamamoto, Yoshinori

CS Fac. Sci., Kyoto Univ., Kyoto, 606, Japan

SO Journal of Organic Chemistry (1981), 46(26), 5294-300

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

AB The use of Cu(I)-N ligand catalysts such as $\text{Ph}_3\text{PCuCl}\cdot\text{L}$ (L = 2,2'-bipyridine, o-phenanthroline, phthalazine) and $\text{Ph}_3\text{PCuBr}\cdot\text{pyridine}$ [25753-77-9] enables the photochem. isomerization of norbornadiene to quadricyclane to occur at longer wavelengths than 350 nm, at which the CuCl catalyst itself cannot induce such an isomerization. Among the norbornadiene derivs. bearing various chromophores, 3-(phenylcarbamoyl)norbornadiene-2-carboxylic acid (I) [78941-78-3] undergoes a facile and quant. isomerization into the corresponding quadricyclane derivative (II) in sunlight. The back-isomerization of II to I proceeds quant. by the use of catalytic amts. of $\text{Rh}_2(\text{CO})_4\text{Cl}_2$.

IT 78941-78-3P 79632-14-7P 79632-15-8P

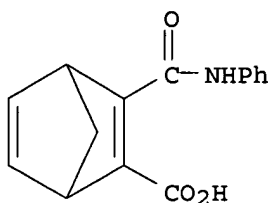
79632-18-1P 79632-19-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and photoisomerization of, for solar energy storage)

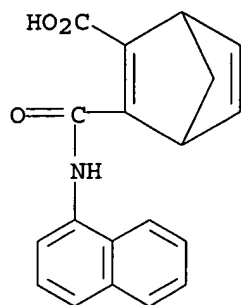
RN 78941-78-3 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]- (9CI) (CA INDEX NAME)



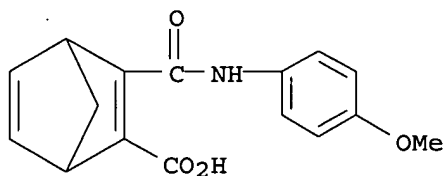
RN 79632-14-7 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(1-naphthalenylamino)carbonyl]- (9CI) (CA INDEX NAME)



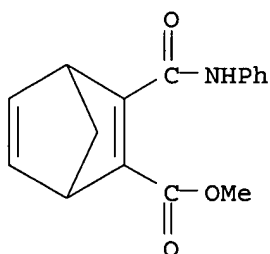
RN 79632-15-8 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[[4-methoxyphenyl]amino]carbonyl- (9CI) (CA INDEX NAME)



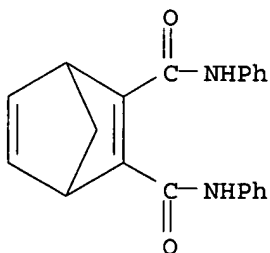
RN 79632-18-1 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

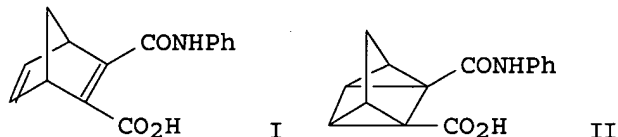


RN 79632-19-2 HCAPLUS

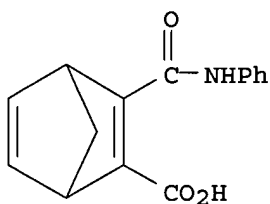
CN Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxamide, N,N'-diphenyl- (9CI) (CA INDEX NAME)



TI Highly efficient valence isomerization between norbornadiene and quadricyclane derivatives under sunlight
 AU Maruyama, Kazuhiro; Terada, Kazutoshi; Yamamoto, Yoshinori
 CS Fac. Sci., Kyoto Univ., Kyoto, 606, Japan
 SO Chemistry Letters (1981), (7), 839-42
 CODEN: CMLTAG; ISSN: 0366-7022
 DT Journal
 LA English
 OS CASREACT 95:114505
 GI



AB 3-(N-Phenylcarbamoyl)-2,5-norbornadiene-2-carboxylic acid (I) undergoes a facile and quant. isomerization to the corresponding quadricyclane derivs. II in sunlight. The back isomerization of II to I proceeds quant. in the presence of catalytic amts. of Rh₂(CO)₄Cl₂.
 IT **78941-78-3**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photochem. isomerization of)
 RN 78941-78-3 HCAPLUS
 CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-[(phenylamino)carbonyl]-
 (9CI) (CA INDEX NAME)



L118 ANSWER 35 OF 35 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1977:502009 HCAPLUS

DN 87:102009

TI 2-Aminocycloalkanecarboxylic acids and their derivatives

IN Bernath, Gabor; Gera, Lajos; Dondos, Gyorgy; Kovacs, Kalman; Janvari, Erzsebet; Sebestyen, Gyula; Ecsery, Zoltan; Hermann, Judit

PA Chinoin Gyogyszer es Vegyeszeti Termekek Gyara Rt., Hung.

SO Ger. Offen., 34 pp.

CODEN: GWXXBX

DT **Patent**

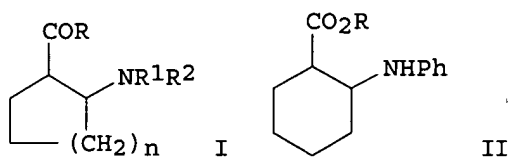
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2624290	A1	19770414	DE 1976-2624290	19760531 <--
	HU 19947	O	19810528	HU 1975-CI1580	19750602 <--
	HU 177576	P	19811128		
	CS 217955	P	19830225	CS 1976-3591	19760528 <--
	CS 217955	B	19830225		
	AT 350518	B	19790611	AT 1976-3954	19760531 <--
	AT 7603954	A	19781115		

FR 2313023	A1	19761231	FR 1976-16648	19760602 <--
FR 2313023	B1	19781215		
AT 346826	B	19781127	AT 1977-6127	19770824 <--
AT 352099	B	19790827	AT 1977-6126	19770824 <--
AT 7706126	A	19790215		
CS 217956	P	19830225	CS 1978-961	19780214 <--
CS 217957	P	19830225	CS 1978-962	19780214 <--
PRAI HU 1975-CI1580	A	19750602	<--	
CS 1976-3591	A	19760528	<--	
AT 1976-3954	A	19760531	<--	

GI



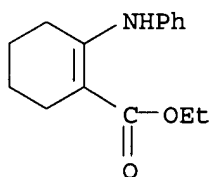
AB The title compds., cis and trans-I (R = OH, OEt, NHPH, NHBu, etc; R1 = H, CO2CH2Ph, CHO, Ac, Me, etc; R2 = H, Me; n = 1, 2) were prepared. Thus, Et 2-oxocyclohexanecarboxylate reacted with PhNH2, followed by hydrogenation, to give II (R = Et), which was hydrolyzed to II (R = H). I are useful as analgesics, antipyretics, and anesthetics (no data).

IT **38778-79-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenation of)

RN 38778-79-9 HCAPLUS

CN 1-Cyclohexene-1-carboxylic acid, 2-(phenylamino)-, ethyl ester (9CI) (CA INDEX NAME)



=> d his

(FILE 'HCAPLUS' ENTERED AT 12:26:37 ON 19 APR 2005)

DEL HIS

L1	3	S	US20040176458/PN OR (US2003-736711# OR US2002-435258#)/AP,PRN
		E	LEBAN J/AU
L2	60	S	E3-E5,E7-E10
		E	KRALIK M/AU
L3	120	S	E3,E4
		E	4SC/PA,CS
L4	24	S	E3-E20
		E	4 SC/PA,CS
L5	2	S	E5-E12
		E	4S C/PA,CS
		E	4 S C/PA,CS
L6	3	S	L1 AND L2-L5
L7	194	S	L2-L5 NOT L6

SEL RN L6

FILE 'REGISTRY' ENTERED AT 12:28:57 ON 19 APR 2005

L8 164 S E1-E164
L9 34 S L8 AND 46.150.18/RID AND C5/ES AND 3/NR
L10 3 S L9 AND 7/F
SEL RN 2
L11 1 S E165
L12 0 S 719301-52-7/CRN

FILE 'HCAOLD' ENTERED AT 12:30:27 ON 19 APR 2005

L13 0 S L11

FILE 'HCAPLUS' ENTERED AT 12:30:31 ON 19 APR 2005

L14 1 S L11
L15 1 S L14 AND L1-L7

FILE 'USPATFULL, USPAT2' ENTERED AT 12:30:49 ON 19 APR 2005

L16 0 S L11

FILE 'REGISTRY' ENTERED AT 12:31:07 ON 19 APR 2005

FILE 'HCAPLUS' ENTERED AT 12:31:15 ON 19 APR 2005

FILE 'REGISTRY' ENTERED AT 12:31:55 ON 19 APR 2005

L17 2 S C20H12F7NO5 AND 46.150.18/RID AND C5/ES AND 3/NR
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L41 26 S L38 NOT L40
L42 STR L38
L43 25 S L42
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SAV L44 KUMAR736/A
L45 STR L42
L46 50 S L45 SAM SUB=L44
L47 2423 S L45 FUL SUB=L44
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L48 STR L45
L49 0 S L48 SAM SUB=L47
L50 2 S L48 FUL SUB=L47
L51 59 S L8 AND L44
L52 33 S L51 AND L47

L53 STR L48
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L56 50 S L55 SAM SUB=L47
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L62 2064 S L57 NOT L11,L61
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L70 24 S L67 AND (C15H13NO3 OR C16H17NO3 OR C24H22N2O2 OR C15H12CLNO3
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L72 47 S L68-L71
L73 45 S L72 NOT ?NITRO?/CNS
SEL RN 34 35
L74 43 S L73 NOT E166-E167
L75 76 S L61,L74
L76 283 S L63 NOT L75
L77 11 S L76 AND (C19H19NO4 OR C19H16N2O2 OR C23H21NO3 OR C21H20N2 OR
L78 10 S L77 NOT PMS/CI
L79 86 S L75,L78
SAV L79 KUMAR736D/A

FILE 'HCAOLD' ENTERED AT 13:59:38 ON 19 APR 2005

L80 0 S L79

FILE 'HCAPLUS' ENTERED AT 13:59:45 ON 19 APR 2005

L81 30 S L79

L82 3 S L81 AND L1-L7

L83 29 S L81 AND (PD<=20021223 OR PRD<=20021223 OR AD<=20021223)

L84 30 S L82,L83

FILE 'USPATFULL, USPAT2' ENTERED AT 14:01:20 ON 19 APR 2005

L85 3 S L79

FILE 'REGISTRY' ENTERED AT 14:01:57 ON 19 APR 2005

L86 STR L55

FILE 'HCAPLUS' ENTERED AT 14:05:13 ON 19 APR 2005

L87 477 S L62

L88 447 S L87 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)

L89 21 S L62 (L) THU/RL

L90 9 S L62 (L) (DMA OR PKT OR PAC)/RL

L91 62 S L62 (L) BAC/RL

L92 84 S L62 (L) BIOL/RL

L93 84 S L62 (L) BIOL+NT/RL

L94 81 S L88 AND L89-L93

L95 47 S L88 AND (PHARMACEUT? OR PHARMACOL? OR PATHOL? OR IMMUN?)/SC,S

L96 19 S L88 AND (DISEAS? OR THERAP?)

L97 3 S L88 AND ?DEHYDROGENASE?

FILE 'REGISTRY' ENTERED AT 14:08:04 ON 19 APR 2005

L98 4 S DIHYDROOROTATE DEHYDROGENASE/CN

FILE 'HCAPLUS' ENTERED AT 14:08:12 ON 19 APR 2005

L99 1 S L98 AND L88
L100 1 S L88 AND DHODH
L101 10 S L88 AND (INFECTION+OLD,NT,PFT,RT OR INFLAMMATION+OLD,NT,PFT,R
L102 4 S L88 AND (IMMUNITY+OLD,NT,PFT,RT OR NOSE, DISEASE+OLD,NT,PFT,R
L103 3 S L88 AND (FIBROSIS+OLD,NT,PFT,RT OR PNEUMOCYSTIS CARINII+OLD,N
L104 113 S L94-L97,L99-L103
L105 89 S L104 AND P/DT
L106 43 S L105 AND US/PC,PRC,AC
L107 20 S L106 AND US/PC.B,PRC.B,AC.B
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:14:17 ON 19 APR 2005

L108 51 S E168-E218
L109 12 S L108 AND (C17H23NO2 OR C15H19NO2 OR C19H23CLFNO4 OR C14H13F2N

FILE 'HCAPLUS' ENTERED AT 14:19:15 ON 19 APR 2005

L110 25 S L109
L111 22 S L110 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)
L112 10 S L111 AND P/DT
L113 8 S L112 NOT HERBICID?
L114 23 S L106 NOT L107
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:20:44 ON 19 APR 2005

L115 330 S E219-E548

FILE 'HCAPLUS' ENTERED AT 14:21:57 ON 19 APR 2005

L116 38 S L84,L113
L117 3 S L116 AND L1-L7
L118 35 S L116 NOT L117

FILE 'REGISTRY' ENTERED AT 14:22:31 ON 19 APR 2005

FILE 'HCAPLUS' ENTERED AT 14:22:45 ON 19 APR 2005

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